RELIGION

AND

The Rational Outlook

BY

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in five volumes and other important works
on Philosophy, Literature and Aesthetics)*

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PREFACE

In 1941 when my husband, the late Professor S. N. Dasgupta, was the Principal, Government Sanskrit College, Calcutta he was offered the Stephanos Nirmalendu lectureship in religion by the Calcutta University. G. C. Ghose, the donor and founder of this lectureship, had created a trust in order to perpetuate the memory of his only son, Nirmalendu.

My husband accepted the offer and set himself to the task of writing out a comprehensive survey of all the religions of the world, past and present. His health had already been broken due to high blood-pressure and heart troubles. But as was customary with him, he did not spare himself and worked day and night to complete this monumental task. The work contains about thousand pages in typescript and was submitted to the Calcutta University. He delivered his lectures and the manuscript of the book written according to the conditions of the lectureship, is lying with the University authorities for publication.

The lectures and the duties connected with them were over. But the occasion stirred him up to set out his own ideas and thoughts on religion and he considered the problems of religion critically from the standpoint of science, biology, psychology and metaphysics. It was usual with him that if there was any occasion, any impetus given to him by queries from students or acquaintances or a relevant situation, his creative reaction was tremendous; he could not stop there but his thought would go on and on in its creative process till it found its fullest expression in synthetic form in language. The artist in him was ever alert and could shape and chisel in finer and fuller moulds —all his re-actions to every thing that came his way, be it nature's beauty, an ordinary happening in life, or a subtle abstract problem of philosophy or science.

For a long time he had been thinking of writing his own system of philosophy. He had thought the problems over and his programme was to write it out in two volumes. He had dedi-

cated his life primarily to the task of writing 'A History of Indian Philosophy' in five volumes directly from the Sanskrit, Pali and Prakrit sources, published and unpublished. But he was a great scholar in European philosophy and science as well. His work in Cambridge was carried out on European thought under Dr. McTaggart and in science he was well up to its most recent advances in many of the problems. He had formulated his own system of thought which was different from Eastern and Western systems in its structure and orientation, though of course, enriched by his learning and knowledge in various fields. His students and friends had on many occasions, requested him to write out his own system of thought first, but he considered himself committed to the sacred task of writing out the History of Philosophy of his own country. He was carrying on this work till the last day of his life. Only a few years ago he had written a short article in which he gave a brief outline of his own system under the title 'Dependent Emergence' which was published in the 'Contemporary Indian Philosophy' edited by Muirhead and Dr. Radhakrishnan. Besides, he had also written a few articles in Bengali, dealing with some philosophical problems of his own.

In the present work, 'Religion and Rational Outlook,' he has given his own ideas about religion and ethics and as such, the book has a special significance. Though the author could not propound his own system of thought in due order, namely, metaphysical position, the psychological and logical approach and the like, still he has left his contributions to religious and ethical outlook in a fairly comprehensive manner. The approach has been both historical and critical. It gives a survey of metaphysical, psychological and political thinkers, their attitude towards religious problems and at the same time gives a critical estimate of science and scientific investigations; and in the light of these, he builds up his own system of religious thought. The treatment and approach are absolutely new. The rare equipment that the author had, his penetrating insight into the relevant problems, a rational and creative mind together with the depth of wisdom and an intensely human attitude towards life, his deep devotion to the innermost ideal which he

called his Lord, all combined together and yielded their harvest in the present work. Though extremely rational and critical by nature he had the sweetening emotion and adoration of heart for his spiritual ideal which was present in him from his childhood. He used to pass away in an easy and spontaneous manner into deep trance-states. In trial and difficulties in suffering and sorrow he never complained nor did he pray. His faith was so intense and his feeling of unity with the dearest Lord of his heart was so complete that he never felt the need of prayer. He used to say very often that since the Lord was there ever shining in his heart, He knew whatever was required and beneficial for him. Our perspectives are small and limited by the very nature of our desires and demands, and we do not know what is good for us or what is the value of our strivings in the light of God's wisdom. This living faith burnt in him day and night in one undying glow of hope and cheer. This sustained him through his long physical illness as also trials of various kinds. With indomitable will he worked his way on to the advancement of learning and knowledge. Had it not been for the inevitable failing of his physical frame he might have completed his own system of thought and left his contribution for other fellow-seekers after truth. Still, we have to be thankful to providence that he was spared long enough to express his own views on religion and their bearing on ethics in the present volume.

With utmost humility and deepest love and reverence and a sacred sense of obligation to the great departed, I am offering this work of his to all who wish to know the problems of religion and their solution from a master mind. I am grateful to The Allahabad Law Journal Press authorities for publishing the work with enthusiasm and deep respect to the author.

In the end I beg the forgiveness of the readers for any errors that may have crept in the book through oversight.

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March 30, 1954

MRS. SURAMA DASGUPTA

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CHAPTER I

INTRODUCTORY

Intelligence, social consciousness, aesthetic and religious sensibility may well be regarded as the phenomena that are manifested in the human stage of the biological evolution. Of these again, intelligence as found in the lowest human level may be found to be very much akin to instinct in the higher levels of the sub-human species. Some form of attraction for the beautiful may also be found among many animals. Many insects and birds and animals show a distinctive type of gregariousness or social consciousness. But the religious sensibility and the associated moral sensibility are particularly human. In studying the various forms of primitive or anthropomorphic religions as well as the religions of civilised people among the various races in the past as also in the present times, it is easy to see that among these religions there are some common and essential facts along with other beliefs or facts of the religious creeds which are largely different in the various forms of religions. When we investigate into the nature of the evolution of one religious system through time, we often find that certain tenets or dogmas that prevailed in a primitive stage gradually lose their emphasis or significance or are annulled and abrogated, or are merely tolerated. If we hold before us the religious consciousness of Judaism developing through the messages of the various Jewish prophets, until we come to Christ, and then, if we pass from the apostolic Christianity to the Christianity of Paul and various other Christian saints and mystics who followed Paul until we come to the Lutheran interpretation of Christianity, we may find ample proof of the fact that religious creeds and beliefs are to a very great extent changeable; this change is often the effect of varying social conditions, the acquisition of new knowledge, learning and philosophy and a change in the emotional perspective of particular religious geniuses. If we hold

in review the evolution of Greek religion from the earliest Homeric times to the religion of the philosophers like Plato and Aristotle, we find that though many of the exterior creeds regarding deities and their rituals remain unchanged, yet the essential form of religion changed entirely in the hands of the philosophers. Again, if we pass in review before our mind, the different stages in the evolution of the Hindu or the Buddhist religion, we are impressed by the enormity of the changes in the religious perspective, though the earlier forms have not been abrogated or annulled, but have been affiliated to the later forms of thought. The popular religious mind has been slowly used to the phenomena of religious consciousness that may seem to be quite contradictory to foreigners. Thus Louis Fischer in his recently published work "The Great Challenge", says "Hinduism is a sponge religion. It includes features of Buddhism, Christianity and Paganism......Hinduism absorbs all dogmas and destroys none. There is therefore no Hindu fundamentalism, all its fundamentals are in a constant stage of flux, which means they are not fundamentals. Hinduism is broad enough to embrace agnosticism, monotheism and idolatry. Hindus have idols before which they dance and pray. But when I ask those Hindus whether they believe in idols, they answered: No, they believed in one God. "If Niagara Falls were in India", Nehru said, "They would be a god. They would be regarded as a manifestation of divinity."[1]

We know that the Vedic religion of worship and sacrifice to Nature gods underwent a serious modification in the monism of the Upaniṣads. From out of this monism there sprang up various forms of monotheism with which image worship has been associated. We have also, in association with these, the Śaiva and the Śākta cults and the mass of rituals, taboos and prescriptions. The Hindu religion thus underwent various changes and modifications and it is not always easy to define the nature of Hinduism within the range of a few fundamentals and essentials, unless we define it in terms of its highest ideals and the perfection of its moral culture. If we look at the evolution of

[1] The Great Challenge (1947 edition) p. 114.

Islam, we find that the simple faith of the Quo'ran allowed itself to be associated with the development of a large body of juristic and legal maxims and, on the other hand, got itself mixed up with the philosophies of Plato and Aristotle and also led to the evolution of Sufism of more or less diverse types.

Most religions involve certain metaphysical beliefs associated with passion and with an urge for high moral perfection. With these are also associated various dogmas, customs and rituals which play a variable rôle with the development of society; and as the mind of the society widens up with the acquisition of new knowledge, it may so happen that in some periods in the development of religion, the essential part of a religion is so over-crowded with dogmas and rituals that one is apt to fall into a confusion as to what may be the essential part as distinguished from the inessential. Even in the same period men of higher culture, learning and wisdom or those who had a distinctly higher level of moral consciousness or a greater fund of religious emotion of a purer type, may have an outlook of religion which is quite different from those who are in the ordinary or a lower level but, profess the same religion. The dogmas and rituals as also some of the creeds and congregational forms of worship, prayers or sacrifices may, however, contribute to the unification of the members of a society by an additional religious bond, though these can hardly be regarded as being the true and essential parts of a religion conceived at its highest. In the medieval times the bonds of religion through dogmas, rituals and creeds were great unifying pinciples which bound together the members of one religion as pitted against the followers of other religions.

The religion of Islam consists of but a few simple fundamentals, which have contributed to the simplicity of the religion as well as its popularity. These are:—1. There is but one formless God, 2. Mahomet is the only prophet, 3. Members of the Islamic religion form a universal brotherhood as distinguished from the members of other religions. Loyalty to Mahomet and the principle of Islamic brotherhood are the two cementing bonds that have bound together the followers of the Islam all through the history of the propagation of Islamic faith. They

bound together the Moslems in their conquering career from Arabia to Spain on the one side, and to the boundaries of India on the other. When they were pitted against the principles of Christian brotherhood, they led to the wars of the Crusades. The force of these binding principles has not yet been exhausted, as it has been amply proved in the successful attempt of the Moslem League for the partition of India into a pre-dominantly Moslem area and a pre-dominantly non-Moslem area. But the principle of Moslem brotherhood was not successful in curbing the passions of the Moslems among themselves. This is sufficiently proved by the fact of the fight of the Shias and the Sunnis at Karvela, and also by the fact, that almost all the Khalifs, who were regarded as the religious and the temporal head, were murdered by their rivals. Among the Hindus, the Buddhists and the Jains however, it is difficult to find even a single instance in which a religious teacher or head was murdered by any follower or a rival. Among them a religious head or teacher has practically nothing to do with temporal power. The Hindu and the Buddhist brotherhood extends practically not merely to the whole of humanity, but to all living beings. Thus in these religions the sense of brotherhood could not bind together their members into a solid block as against the members of other religions. King Aśoka, probably the greatest king of the world, is believed by many to have been a Buddhist. But whether he was a Buddhist or not, he did not show any preference to the members of the Buddhist community as distinguished from the members of other religions. In his edicts he prescribed gifts to Brahmins and Buddhists alike; he advised that members of different religions should sit together and compare their different religious principles for their mutual benefit and instruction, and should on no account glorify their religious opinions as against the views of other religions. The Buddhists and Jains were opposed to each other in many of their religious dogmas; yet the Jains used to erect their temples mostly in those places where Buddhists had already erected theirs. When the Buddhists complained to Aśoka against this behaviour of the Jains, Aśoka dismissed the application and issued a rule in one of his edicts that as the Buddhists and the Jains were inspired by the

same kind of religious urge, there could be no objection against the erection of temples by the Jains in Buddhistic places.

In tracing the history of the spread of Christianity we find that the Christians in the early days were severely tyrannised over by the Romans adhering to their pagan religion; but when Christianity became firmly established, the Papal tyranny for the slightest non-conformity with the creeds of the Christian Church or the slightest opposition against the wishes of the Pope, was severely reprimanded even to the extent of burning alive the victim. Even in the period of the Renaissance, Christianity did its best to stop the growth of new-born philosophy and science.

Galileo was put in a cage, and Bruno was burnt alive. Among the Moslems also we find that the great Sufi saint Mansur was cut into pieces for declaring his conviction that truth was one. The barbarity of Christianity in the inquisitorial days is almost un-paralleled in history. People believed in all kinds of superstitions and regarded them as parts of the Christian faith. They would rather believe that a witch could ride over a broom-stick through the air rather than allow an innocent experiment in Chemistry or Anatomy. Even now there are many people in England and America who do not believe in the Evolution theory, because it is against the creation theory of the Bible. In Hinduism and Islam the bloody rites of sacrifices still persist. There are many other superstitions both among the Hindus and among the Mahāyāna, Buddhists of Tibet, some of which are innocent, while there are others which verge upon criminality.

From one point of view therefore, it has been rightly maintained by many that religion has been productive of endless intolerance, evil and superstitions which, through the ages have thwarted the progress of the human mind and have produced much that is inhuman and barbaric, cruel and vulgar, and have perpetuated animosities amongst the members of the different religions. India may well serve as a point of illustration. National interests are subordinated to the sentiment of Moslem fraternity and engendered fratricidal passions of a shameful nature.

In modern times in Western countries, religion is gradually

losing its force. The development of science, Anthropology, Psychology and even Metaphysics and Sociology is undermining the roots of religions so far as they are based on dogmas and rituals, creeds and rites or faith in revealed scriptures. For cementing the members of a particular society within certain geographical limits under a unitary political system, nationalism is playing the same part as religion used to play among the co-religionists. When the Protestants fought the Catholics or the Catholics massacred the Protestants, nationalism was not born. With the development of science and technology, rise in the standard of living, the invention of various types of means of economic production, the opening of many markets in the world and the growth of political rivalry or supremacy, the race for attainment of power, for capturing raw materials from different parts of the world, the development of communications by sea and air, and the invention of military weapons which can cause destruction in an extremely massive manner, the spirit of nationalism has spread among the masses in an unprecedented manner. The struggle is no longer between Kings and Kings, or governments and governments, but among people and people. The civilian at home is as much in the war-field as the soldiers in the battle-field The disasters at Hiroshima and Nagasaki have proved to the world how an entire city may be wiped away by an atom bomb. Nationalism having risen to its apex finds it to its greatest disadvantage that the cementing tie of nationalism that is restricted to a particular people in a particular geographical area, gradually becomes unsuitable for the self-preservation of the people. The bond of brotherhood in religion, depending upon loyalty to particular prophets, rituals, customs, rites and creed, had at one time served as a great bulwark of protection to the members of a particular religion against the members of other religions. Gradually in course of time with the advancement of knowledge, change of circumstances and economic conditions, the spirit of nationalism in the West practically superseded the spirit of religious unity. The German people particularly in Hitler's time wanted to have an additional support to their spirit of nationalism from their supposed Nordic origin by which

racial unity was integrated with the spirit of nationalism. This led to the aggressive spirit of the Germans and finally to their collapse. It is gradually becoming clear that no form of aggressive nationalism or imperialism, be it in the form of Fascism, socialism or democracy, is likely to guarantee security or peace. Aggressive nationalism in one is likely to engender the spirit of hostility in others and combinations may be formed leading sooner or later to a major war. As the world stands now, no nation can say with impunity that it can indulge in any amount of aggression and yet preserve its security and peace. The cost of a war in terms of human, moral and material loss and in terms of social set-back has been growing from more to more, from one war to another and is likely to grow to tremendous dimensions in possible future wars, and may ultimately lead to the dissolution of civilisation and culture, and reduce humanity to barbaric conditions.

Science has contributed much to the amelioration of human sufferings, in raising standards of life and producing comforts unimaginable in previous times. It has made movement in land, sea and air incredibly easy, and has brought together the people of distant lands within a focus of immediate communication and has brought about facilities for mutual inter-change of ideas, that were unthinkable at any time. Side by side with these beneficent developments, it has also produced weapons of such terrific destruction that the time is not far ahead when it will be possible for the whole of humanity to commit suicide at any particular hour or any day. Science has discovered for us some of the deep secrets of nature and with the development of technology we are able to utilise this knowledge either for our well-being or comfort, or for the destruction of our foes. But the development of our own nature, so far as spirituality and morality are concerned, has not gone on abreast with the development of our scientific knowledge. The development of civilisation and culture has but slightly ennobled our nature. The result is, that we are as much brutish now as we were tens of centuries before. The development of science has thus placed in the hands of a comparatively civilised chimpanzee or Gorilla, weapons of unimaginable destruction. The disastrous effect of

world war is not only to be judged in terms of loss of men and material and labour, but also in terms of large scale economic disorganisation, famine and suffering. The countries of the world have now come so much closer as fields of mutual economic advantage and disadvantage that even a little unprovoked attack on a small country may sooner or later develop into a world war.

Two facts emerge from the considerations we have just now discussed. Firstly, the fraternising influence of religion based upon the lower, popular and inessential sides of a religion, though capable of effecting a bond of unity among the co-religionists, is quite incapable of creating the federating spirit of mankind. Being limited to effectuating an integration among the co-religionists it stimulates the people of one religion to behave barbarically towards the people who are members of other religions. This was the case of Islam, and this was also the case with Christianity in the middle ages. Hinduism and Buddhism, which lack this spirit of religious brotherhood among the members of those faiths, have not, therefore, been able to exercise the force of their unity in the direction of fighting with other people or enslaving them. Yet it is well-known that the ennobling influence of these religions particularly of Buddhism went far beyond the bounds of the geographical borders of India. It may not be out of place here to remark that the refined form of Buddhism is particularly lacking in complex theological creeds, rituals and rites.

Secondly, the spirit of nationalism discards religion as a bond of unity. But it encourages in rousing the selfish economic interests and the sense of prestige, pride and desire to attain power amongst people living in a fixed geographical area under a particular political government. As such the higher and broader interests of the cultured few, find but little place in the unity that develops under the spirit of nationalism. By sheer force of majority of the crowd the lower and baser instincts of man are multiplied millionfold so as to swamp within it any flicker of dissentient voice that may rise from other considerations. The nobler elements of individual life are crushed in the crowded gathering, the voice of which manifests itself through

greed, vanity and love of power. The brutality that lies dormant may be infinitely multiplied into active awakening in the behaviour of one nation towards another. Thus the spirit of unbridled nationalism tends to become aggressive and can only be restrained from actual mischiefs through fear and weakness. This also can, to a large extent, be overcome by entering into combination. The bond of union among such combining nations is a hope of the spoil that may be gained in case they are victorious. But the recent catastrophic war has made it clear, that it is not only the vanquished who suffered through the war, but even the victors have to pay a heavy toll which they can ill afford to do.

Russia after the revolution had seemingly started a new scheme of federation which was not based either on the spirit of religious fraternity or nationalism. They seemed to pin their faith on the economic well-being of the suffering humanity irrespective of religious creed or nationality. But as Russia was gaining in strength, gradually the spirit of Slav nationalism has begun to make itself felt though it has been camouflaged under the old formula of equality. The Soviet policy is now to give special attention to the Slav parts of Europe. When the Soviet Union was internationalist, its slogan was "Workers of the World Unite". But it is trying to unite the Slavs as well. During the last war many Slav congresses were held in Moscow which were attended by delegates from various foreign countries. But no international proletariat congress or workers' congress or Trade Union Congress had any sittings in Moscow during the period of last war. The Slav congresses stressed the bond between Russia and the Slav countries of the Eastern Europe. This succeeded in forming the Soviets Slav Eastern Block which is now being resented to by England, France and America. The Soviets are catering to nationalist tendencies that have survived the revolution, and are trying to revive nationalist feelings that lay dormant, and to plant these in the minds of the new Soviet generation. The bulk of the population of the Soviet Union was brought up in inter-nationalism and had but little knowledge of nationalism. The Soviet government tried to compensate the sufferings of its people by injecting pride in

the Bolshevic revolution. But this was not felt as a sufficient incentive or as having sufficient emotional appeal and the incentive of nationalism had to be introduced. This spirit of nationalism has to be fed and nourished with a desire for territorial extension. This at the present moment is seen not in actual aggression, but in rousing the Slav feeling among the Slav countries, so that their resources might be employed for the rebuilding of Russia. The day is not far when the pure internationalism, which was a motto of Lenin and Trotsky, would be replaced by a Pan-Slavic idea of nationalism.

We thus see that nationalism which superseded religion as a bond among the members of a particular people and the communistic ideal, which was supposed to take the place of nationalism for uniting the suffering multitudes of the world, have both failed in the new crisis that has appeared in the field of conflict among the various nations for self-interest, prestige and power. The principle of power politics is being nurtured by the powerful nations, though they all know that the race for power may ultimately lead to a complete destruction of the civilised world. It is true no doubt that concentration of power among the important nations aided by mutual alliances among the various groups, may give a false sense of collective security and a sort of respite for a short time. But with the inflammable material of war preparation on all sides, it is but logical to suppose that at any moment the slightest provocation, aggression or arrogance may discharge a tiny spark which may lead to the conflagration of a major war.

If the rise of nationalism is going to prove to be the mightiest disruptive force, the vital question that must be present in the minds of all thinking men is, to discover, if possible, some sources in our own nature which may so transform us that great peoples should have a natural aversion to wars which may to a large extent counter-balance the spirit of aggression. The growth of scientific knowledge has shaken very much the old foundations of religion which might have proved a strong moral and religious incentive against all spirit of hostility, aggression, self-love and haughtiness. Unfortunately, if we take any religion with all its associated dogmas, creeds and rituals, the essential

humanising influence of universal fraternity becomes much dissipated. If we take the religions in their ordinary popular settings as beset with diverse creeds and rituals, they would appear so different from one another that their essential spiritual unity would naturally be missed and they would cease to a very great extent to exercise a universal ennobling and fraternising influence. It is, therefore, necessary to investigate the nature of religion from a rational point of view to distinguish between the inessential and essential part of religion. We have to discover the extent to which our growth of knowledge may be found incompatible with religion. We have also to discover the extent to which religion remains unaffected by our scientific and other kinds of knowledge. We have also to find out the extent to which religion may be regarded as a fundamental fact of our experience and as ennobling us through morality to beyond morality.

In the various chapters on the present work, I have tried to discuss the scope of the discoveries made by the various sciences, and I have tried to show that though modern learning and a rational outlook may be antagonistic to many of the inessential details of a particular religion, the claims of religion are fundamental to our nature and they are quite unaffected by our scientific and rational thought. In becoming fully conscious of the essential ennobling influence of religion as fundamental to our nature and as thoroughly consistent with our knowledge in other fields of nature, we may become rationally convinced of the truth of religion in its essential nature and such a conviction may go a great way in humanising our nature to the best interests of universal friendship and charity and a better understanding of our fellow-beings, even if we are not able to have the spiritual experience of the great religious geniuses. All religions, in their development, contain many rituals and rites which also sometimes demonstrate a human logic of Universality. If we look at the religious practices in the most distant islands in the Pacific and the Atlantic, as also the religions most separated from us in time as occurring in the oldest periods of Egyptian culture or the Aegean civilisation, or the religion in China, we find a universality of expression, where humanity shows itself as one in

spite of the most accentuated spatial and temporal differences. So also with the advancement of human mind we come to a particular cultural level, where the essentials of all religions carry the same meaning. It has been said that man is a social being. If that is true it is as much true that man is also a religious being. From the lowest stage of humanity that is known to us we find as much the social instinct as the religious instinct. While the social instinct may be traceable even among many animals and insects, multitudes of which work together for a common end by a highly complicated social co-operation, religion is pre-eminently a human instinct. We do not know of any animals which show any instinct for religion. The religious and social instincts have always gone together, mutually co-operating with each other. Both the instincts have good or well being as their end. While social instinct aims at common good and individual good, religious instinct works for good that is attainable here and also beyond. The social instinct expresses itself in its own rituals and rites which being too familiar to us often do not show themselves as such. Thus it is said that an Englishman living alone in his tent in the desert of Sahara, or in a lonely island, like Robinson Crusoe, would still take to his dinner dress before he thinks of going to dine. The complicated etiquette of a civilised society is too difficult a matter to carry on with a man of another society. The etiquette varies also from circle to circle in the same society. When you have to touch your hat, when you have to draw it out altogether, where to put the hat and where to put the stick, how to accost a man and how to accost a woman; when you can smoke, when you cannot, are so well-known to a native which may very well puzzle a foreigner. It is difficult for us to see why we should shock the modesty of the ladies when we go out in a pyjama suit, when they themselves can appear in a dining saloon in scanty clothing; yet if we wear a dressing gown, the defects of the pyjama suits are at once removed. The expressions gesittet (mannerly) and sittlich (moral) mean respectively that which is in accordance with the social custom and that which is in accordance with the universal norms of morality. By polite manners we understand the conduct of an individual in accordance with rules laid down by

custom as shown particularly by personal deportment, by considerations of intercourse with each other. Primitive man expressed his joys and sorrows without any reserve. Homer's heroes expressed their emotions in loud outcries. . But in the Laocoon the dignity of suffering is expressed with great reserve or not expressed at all. Repression of expressions of joy and sorrow are the maxims of modern social life. It is not that we have always practised apathy, but we should practise sufficient restraint of emotion, not carried too far so as to suppress the existence of natural feelings, but sufficient to shield others from impressions that might disturb them. A thoughtless word, an unbridled emotion may easily offend a fellow being with whom we may be in intercourse. Every mode of unaccustomed behaviour appears to us as offensive. Polite manners forbid not only what is really displeasing but anything that might appear objectionable in the least. Anything out of the usual draws an undue amount of attention and is a cause of offence. The man who dresses in an entirely different way and the man who takes from the dish with his hand instead of forks and spoons is just as unmannerly as those who burst into loud laughter at their neighbour's awkwardness or talk obtrusively. Personal deportment is always controlled by consideration for others. Pleasure and pain may be felt by an isolated individual, but the manner of his expression in his isolated condition is very different from his expressions of the same in society. This consideration for others is, for example, manifested in salutations, which though colourless, is intended to show respect to a fellow human being. There may be all sorts of ideas such as friendship, kindliness, humility etc. associated with it. The offering of the hand by a person, which was originally intended to show that he carried no weapon, the uncovering of the head which showed defencelessness, have now attained a force by themselves and their absence or withdrawal would be interpreted as a defficiency of manners. I need not dwell on this point at length and go astray from the sphere of our discourse. But what I wish to emphasise here is that even our social deportments in their variety and complexity carry with them the idea of bestowing happiness on others or preventing others from being

mortified at our conduct. That the object of morality, which is more comprehensive and universal than social deportments, is also the same, namely, the attainment of social good or the prevention of social evil, cannot be gainsaid for a moment whatsoever may be the nature of the theory of the springs of moral action. In religion also we have our own good and the good of the society, as our end. But in religion there is always another factor, namely, considerations for the Beyond. The magical rites of the primitive people as well as ancestor-worship which are found in most stages of lower racial civilisation of culture, reveal the fact that they proceed from the assumption that by them one can satisfy the invisible powers, be they of spirits, demons, ghosts, genii or the spirits of the departed, and thereby prevent any mischief or secure any good for oneself or for one's society. This belief in the invisible and the beyond shows itself in various forms of post-mortem existence and thereby project the reality of the present concrete life to spheres that transcend them.

The fundamental concepts of religion and morality are, therefore, wedded together from the beginning and a study of the different religions proves it to our satisfaction that when any particular religion rises to its summit it also involves the development of a very high standard of moral life. The sense of oughtness or obligatoriness that is found in moral concepts is also to a large extent the same in religion. The theologians and theological moralists often try to shift the burden of moral obligatoriness to religion. Thus Martineau holds that morality implies obligation and obligation implies obedience to the command of some law giver, whose laws bind us to their obedience. There cannot be any obligation if there is not a person to whom we are obliged. Our sense of moral obligation, moral consciousness imply the presence of a law-giver who discharges his voice in thundering echoes from the recesses of our heart and as there can be no other person than God who can command all beings in the same manner, the existence of the sense of moral obligation is the proof that we are constantly hearing the voice of God and feeling his presence within us. This voice is supposed continually to discharge itself as 'thou shouldst' and 'thou shouldst not'.

At this stage morality and religion seem to be held in equilibrium.

Apart from any theological considerations if we consider morality only on a social basis, we find that from our childhood or rather from our very infancy society is expressing its voice to us, and trying to train us in the manner in which we should behave when we grow up. The father, mother and the teacher are the representatives of society who are watching our every movement, our speech and deportment or action and abstentions, our expressions and inhibitions and directly and indirectly, always attempting to control them in the manner in which they anticipate the wishes of the society. Lives of great men who serve society are held before us. Promises of reward or punishment and even destruction are held before us in a manner as done by the religious prophets of the past. Society appears to us as an inexorable judge, which would relentlessly punish us for our transgressions. We are reminded of the Mosaic covenant with God, who, on the fulfilment of the covenant, would take the people to lands flowing with milk and honey and who would, on the failure of the covenant, mercilessly punish them.

It is true no doubt that the form of ~~the~~ social mind as the avenging judge and commander of our conduct, which by its covenant gives us a place in the society for protection and well-being, and outlaws us on the failure of the covenant is neither so distinct nor so concrete as the thundering God marching over the sky in the plumage of his lightening and declaring His wrath in brimstone and fire or with soaring billows of the sea. It is also true that the rituals, with which such an invisible god is to be appeased e.g., by the offering of the sacrifice of the first born or the observation of the fast and the like, are more well-marked and definite than the various social customs and deportments that are insisted on in society, which pass away unnoticed in our efforts at continual adaptation to social life. But still the customs are there and every transgression of them is duly taken note of, and punishment awarded. Just as a single cell in the human body has to behave and adapt itself in consonance with the behaviour demanded by the multitude of cells that surround

and envisage it, every individual soul has its spiritual existence in the life and spirit of the social being into the life of which it has been impregnated and in and through the life of which it will realize itself as an individual entity.

It is true no doubt that we can speak of God as an objectively existing deity, who created the world, the sun and the moon and the planets, the unending space and the spangling stars that run fathomless in its depths, the foaming seas, that skirt the tiny land, the snow-clapped mountains and the volcanoes spitting up fire, the Being who is bewitching our eyes with the loveliest of flowers with intoxicating smell, and colour pouring forth like the effulgent springs—reflected in rainbow and the emerald grass and dewy herbs, the Being who brings epidemics and disasters, starvations and ruins, the horrors of the earthquake and the war. But we cannot speak in the same terms of the social mind. But though we can speak of God in objective terms yet we have never seen Him with our eyes, nor heard His voice with our ears. He may have innumerable qualities as Spinoza and Rāmānuja would say, but still we are all in agreement that we can only realise so far of Him as we may perceive in our mind and heart. In this respect our conception of a personal God is bound to be anthropomorphic and social. Our God is truthful, just, benevolent, merciful and loving. All that we wish all good men to be, are attributed to God.

There are no doubt many systems of religion in which God is represented as an avenging judge who enters into a covenant as much as on His behalf as on behalf of men. The Jewish God is always anxious that the sons of Israel do not worship other gods than Himself, and like a king who wishes to keep their subjects loyal to himself, imposes the cruellest punishment on the disloyal and the rebel, and is ready to bestow His favour on those who are loyal to Him and observe His laws and command. He shows His anxiety to keep the sons of Israel loyal to Himself and demonstrates His miracles to stun them with awe and fear. But this only shows that the people at this stage were not capable of realising the force and power of anything else than fear. The God here, is almost a naturalistic god, the wind, the fire, the volcano and the sea, which would not for a moment forgive

our transgressions. The Upaniṣadic sage speaking of this naturalistic God says *'bhayād-asyāgnistapati, bhayāttapati sūryo, bhayād indraśca vayuśca, mṛtyurdhāvati pañcamaḥ'.*

Through fear of Him the fire burns,
Through fear of Him the sun gives heat,
Through fear, Indra and Vayu both,
With Death as the fifth, speed on their way.

God is He, by whose fear nothing can transgress His law. But so long as God is viewed as an external lord of great mystery and power, an emperor of the Universe who rules with iron hand, man, with the Universe of nature to which he belongs, we have no spiritual contact with Him. Our contact is only with the covenant and our relation with Him is only of fear. So in a man's relation with society so long as it imposes its tyrannical laws over him, he cannot be in consonance with it. It is a relation of hostility and not a relation of joy. It is a tendency to equilibrium in which the two forces are tending on opposite direction. It comes in conflict with the freedom of our spirit. This God theological or social, would not be good; it would be only powerful. And we could not think ill of any person, who, like Prometheus, might brave this God and refuse submission. In the strength of his freedom and the endurance of his sufferings he may hold his head high aloft and refuse to fear any power that might wish to control him and bring him to new worship merely with the scourges of misery. Like Prometheus one may say,

Monarchs of gods and demons, and all Spirits
But one, who throng those bright and rolling worlds
Which thou and I alone of living things
Behold with sleepless eyes! Regard this earth
Made multitudinous with thy slaves, whom thou
Requietest for Knee-worship, prayer and praise,
And tail, and hecatombs of broken hearts,
With fear and self-contempt and barren hope.
Whilst me, who am thy foe, eyeless in hate,
Hast thou made reign and triumph, to thy scorn,
O'er mine own misery and thy vain revenge

Three thousand years of sleep unsheltered hours,
And moments aye, divided by keen pangs
Till they seemed years, torture and solitude,
Scorn and despair,—these are mine empire,—
More glorious far than that which thou surveyest,
From thy unenvied throne, O Mighty God!
Almighty, had I deigned to share the shame
Of thine ill-tyranny, and hung not here
Nailed to this wall of eagle-baffling mountain,
Black, wintry, dead, unmeasured, without herb,
Insect or beast or shape or sound of life.
Ah me! Alas, pain, pain ever, for ever!

—Act I.

In the book of Job we find Job reviling God in spite of his obedience to Him for what he has been made to suffer without any reason, to which God's feeble reply appears pompous by the demonstration of His majesty. God therefore, to be good must be founded in the normal yearnings of the heart. He must be conceived not so much majestic as loving, for it is only in this that we can be God's and God can be ours. There is nowhere any good but only in the human aspirations. There is no good in the brute nature. All the expansive firmament with its bright stars throwing trails of luminous glory behind the shadowy unknown pouring forth billion, billion volts of cosmic energy upon the frail and tiny body of the earth, the whole chasm above and beneath, however great, mighty and majestic, does not contain an idea of good. Good is in the ideal of man and if God is good and if in that respect alone He is perceivable by us, in reconciliation with us, He must be an emergence, a creation of the human heart. Born there, He suffuses the whole world with glory, interprets the whole world not only as the world of reason but as the world of purpose and the world of love. It is with this God in our heart that we can transform the mechanistic universe into a universe which tends for the good and perfection of humanity. If this be so it is of no matter, if any particular religion does not admit the existence of any objective God. Any religion, which admits the ideal and which admits love as the good, admits God in essence, though it

may not have an external form. It is for this reason, that the religion of Buddha or of Mahavira though they deny an external God, virtually admit the god of the heart and of the reason, which expresses itself through the onward strivings of the ideal of love. It may hold within itself all humanity, nay, all living beings, it may perceive the purpose of the universe in the destruction of evil and sorrow, and it may lead us through the spontaneous attraction of love beyond the goal of ourselves to the torchlight of universal love, shining in the effulgence of its spirituality high above the brute mechanism of a material universe. It may transform itself in the clothing of its own spirituality, so as to manifest nothing else but a milky ocean of love and intelligence and freedom, and bind us all in golden chains of sympathy and love.

Turning back to our relation with the social self and our individual self, we find that with the elevation in religion, with this deeper insight and engrossing love, our relations with the social self is no longer one of domination and suppression, of covenant and counter-covenant and their fulfilment, but a free spontaneity wherein our individual wills slowly merge in the throbbing pulsations of our own higher reality, as reflected in the social self. The dualism between the self and society that could have created the oppressor and the oppressed, the king and the subject, the commander and the private, vanishes. Obligation dwindles away into a mere name and the individual self expands itself in its spontaneity in the social self.

Spencer had in his treatment of Ethics postulated the proposition that in the perfected society the organisation is so perfect that no necessity arises there of the subordination of the individual to society, both realise that their interests are identical. Whether in the progress of evolution such a state of society will come or not it is more than I can say. But when religion elevates the heart and attunes it with the spirit of God and man, the melody of love engulfs the individual demands of morality as truth, justice and the like, the bond between the individual and society becomes perfect and every individual realises the fundamental fact that its own being is a function of the complex being of society, just as the life of every indi-

vidual cell is a function of the conglomerated cells in and through which alone every cell can live. At this stage morality vanishes into religion and religion overflows morality in the perfection of the union of human and the divine.

The world at the present moment is seething with discontent, jealousy and hatred, greed and ambition, rivalry for dominating the world, impoverishing and enslaving the weak and the down-trodden, and spreading misery and devastation everywhere. Narrow nationalism which understands only the interest of a people under a particular geographical area has turned hostile to the right of existence and well-being of other nations, and is jeopardising the chance of its own existence. A nation is a bigger society, it is an organisation, the ideal of which ought to be the same with reference to other nations and societies. When through artificial efforts, our circumstantial contingencies, the economic and the political functions of the society become over emphasised leading to undue accumulation of wealth and power, the other function of the society becomes atrophied, and society misses its proper purpose and struggles for imperialism and attainment of power. Economic competition for wealth leads to the discovery of new lands, the exploitation of the resources of new countries and hence to the subjugation of men of the weaker races. This rouses the jealousy of the more unfortunate nations, but which have a similar faith in a mechanised civilisation and bent on the acquirement of more and more wealth and greater military powers.

Inside society, the tendency of over mechanisation and the undue emphasis on the attainment of economic and political powers lead to a dissolution of natural bonds, set man against woman, employers against the employee, and the diverse normal functions of the society in the direction of art, literature, philosophy and religion suffer by disillusionments. The mechanical ideas of realism as realisable in power or wealth break the ideals of a soaring genius, and subjective contentment becomes as contemptible as the dust of the ground. The cry of the modern civilisation denounces restfulness, quietness and contemplation, and the inner resources of happiness and joy are denounced as idle and dreamy fancy. The whole genius of man becomes de-

voted to hurrying the wheels of the evolution, by putting premium to continued contest and struggle. As the discoveries and inventions of science have made available to us instruments of locomotion at a high speed, so there is everywhere a bid for stimulating all the potentialities of life into blazing actualistic tendencies to reduce themselves into actual assets of life as wealth and power. The higher values of life are ignored. Beauty becomes despised and grim practicality ascends the highest throne. With the disappearance of the sanctity of the high moral and the religious truths, civilisation and culture relapse back to the brute ideal of Nature's evolutionary law of the 'survival of the fittest' and 'might is right'. Life's race has to be run too fast and all the shelters that philosophy, poetry and religion have woven like a net-work fast disappear in the hurricane of movement. The ideal of the attainment of national power leads to a refusal of the birth right of man as a free individual and in the interest of the atrophied and unbalanced life of the social self, the individual liberty is sacrificed and this leads to various state policies of fascism and national socialism in which a single usurper usurps the liberty of all. The efficiency of the state is reduced to a single mechanised purpose such as the attainment of power to its highest pitch. In the name of delivering economic equality, communism is established where the liberty and power of the individual are again stolen in the name of the state. Thus the normal relations of the individual and the society as forming the two arcs of a circular flow of life, where the reality of the one was included in the life of another and vice versa, is forgotten. The society or the state behaves as a grim demon who swallows in his hunger not only the individual liberty of its own constituents, but is ever ready with its rapatious paw to hunt the liberties of other nations as well. During the last quarter of a century we have the history of the struggle of nations and the horrors of the war, the sacrifice of the young life, and the streams of blood flowing through the immolation of the innocents, science and learning, at the altar of the grim demon that has been produced by the unnatural conditions of the present social and national ideas. Some writers have asserted that the fault lay merely in the ideas of narrow national-

ism, but it appears to the present writer that the roots are far beyond that. The fault of the present culture and civilisation lies in the disproportionate development of scientific knowledge and learning in its various departments and the comparative backwardness of spiritual control. The brute law of evolution that might is the greatest truth, that power is the greatest virtue, that selfishness is the greatest incentive has blinded our eyes to the fact that by stirring up the blazing fire of evolution, by emphasising its motto with all the powers of human intellect we are sacrificing ourselves at the altar of brutality and losing all our happiness.

John Stuart Mill, in his book on Liberty, held that men were to be free in so far as their actions did not interfere with those of others. But when the interests of others were infringed, such actions might be restrained by the state. But one may say that in propagating any free opinion of oneself one may in many cases adversely affect the interest of another, and the right of restriction possessed by the state may often exceed the right limits. As a matter of fact it is often extremely difficult to determine how far the rights of individual liberty may be respected if they are judged merely by the sense of justice claiming consideration on both sides. In the present day fascistic governments' claim has been laid covering the whole sphere of individual liberty. An individual cannot speak or do anything unless it is approved by Signor so and so, or Herr so and so, or Comrade so and so. Again, Governments are threatened by two dangers, a revolution or defeat in war. Then dangers rouse the instinct of self-preservation and it is to be expected that the governments will do what they can to avert them. From this point of view the question arises how much freedom of propaganda will produce the greatest degree of stability both against internal and external dangers. If the Government is itself recent and revolutionary and the population has strong reason for discontent, freedom is almost sure to bring further revolution. This happened in France in 1793, in Russia in 1918 and in Germany in 1933. In all such cases when the society or a government behaves as an individual and has its own self-interest (not necessarily limited to the well-being of its constituents) pitted

against that of the individual citizen, it becomes difficult to ascertain on moral grounds, whose will ought to get the right to be exercised. The only way in which the difficulty may be solved is to encourage such spirit in both, so that the problem may not arise at all.

In the present day society when the Governments over-emphasise the political and economic lines and require the utmost sacrifice of the individual in that direction and lead them to war, such steps would lead to the unmitigated evils of war and the horrors of revolution. Even a victory is not a victory. It is only a temporary truce among the contending parties until the defeated party can gain sufficient strength to fight again. The great war of 1914 has proved to us how impossible it is to attempt to injure permanently the capacities of an opponent. Even the so-called victory is attained at an indescribable loss of men and money and the extreme suffering of the people. What the nation gains in prestige is shadowy and hollow. If the prestige is interpreted as greater potentiality of power, its strength can only be measured by another horrid war. Thus in every direction faith in the right of a nation or individual to grow in power and dominate others by its might leads us only to a vicious circle of suffering to suffering. But a cloud of ignorance as dense as a mountain is sweeping over the firmament of the most civilised races. On the Continent, particularly in Germany in Hitler's time and in present Russia, individual freedom is so much in abeyance that the state regards itself as a guardian of truth in Science, Metaphysics or morals. No one is allowed to express a moral, ethical or sociological opinion which is not approved by the authorities of the state.

The propounders of the communistic theory wanted to bring millenium to the world. Communism is said to be the summum bonum of the dialectic of Materialism which by an extreme concentration of money through state capitalism and impoverishment of the people at large would so turn the table that the country will possess only one class of people namely, the laborites. The inequalities of the people would be removed when the passage of the society into one class is reached, when in the proletariat society every body shares equally the products

of the country and his labours. But in the actual communistic state we do not find any such happy blessings showered on the people, while in lieu of what is given to any one in the shape of scanty food and clothing, the best of all sources of happiness namely, individual freedom, has been usurped by the state. Governments hanker after power and vie with one another for its possession, and does not know that in trying to attain this it will lose all its usefulness. Love of power can only be justified for a beneficent end which is different from the power itself, and it should not have effects outweighing the excellence of the beneficent end, it may achieve. Everyman's character and desires undergo perpetual modification as a result of what he does and what he suffers. Violence and injustice meet violence and injustice both in those who inflict them and in their victims. Defeat, if it is incomplete, breeds rage and hatred, while if it is complete, breeds apathy and inaction. Victory by force produces ruthlessness and contempt for the vanquished. Force not only fails in its own purpose, but is dangerous to itself for the cause of good. In the contest for attaining power and supremacy the original object of power is either lost sight of, or becomes incapable of being effected. Thus we find that in our modern society and civilisation we are running an unbalanced career and resorting to courses of our own destruction. We may not revive the old ideals of absolute renunciation and resignation but for our own happiness, even for our own material comforts we ought to look round and see how balance may be restored. In this task of ours it is well worth rediscovering the great truths of religion founded upon love and fellowship of mankind. We may find much that is refreshing, much that may restore us to our balance, much that may lead to the well-being of mankind, to the alleviation of human suffering and an approximation towards attaining a state of blessedness and a kingdom of God on earth.

The conflict between society and the individual, and the conflict between the demands of our higher nature and those of the lower ones, most often tend to produce a vicious circle from which it is difficult to escape. But in spite of this logical difficulty, the voice of our moral sense has always on the

whole, tended to control our actions for our own benefit and the benefit of our fellow members of the society. But in modern times the scope of our duties cannot be limited to the members of our own society or nation. The safety of any particular nation depends upon the well-being of the society of all nations. To extend the bounds of morality to such wide limits, one requires a broader view of life and a greater humanism. It has become necessary for us to rouse ourselves to a fuller conviction of the essentials of religion which are in a very true and deep sense the ground of our morality and love of humanity.

The advancement of science and learning may appear in modern times to have weakened the roots of religion as conceived in its dogmatic formulation of earlier times. It is possible, however, to distinguish to some extent the inessential parts of dogmas, rituals, etc., in which the religions mostly differ and the essential parts in which most religions would agree. In the chapters that would follow I have tried to discuss the manner in which our modern scientific knowledge and learning may appear to be a menace to many of the cherished ideas of different religions. I have made, however, an attempt to show that this apparent conflict does not in any way affect the most universal, fundamental and essential spirit of religion, and yet it is this which can really transform our religious personality and give it its ultimate value, and it is this which can prove itself to be a perennial source of strength and vigour to our moral life which should be re-juvenated by a sense of greater optimism and a greater humanism. Our religious life should be so elevated and invigorated that we may fix our eyes not only on a goal of internationalism, but we may stretch them farther to a higher point which transcends both nationalism and inter-nationalism. This involves a new interpretation of religion in which the essentials of universal religion for the development of our true religious personality would receive the proper emphasis that it deserves and which has often been lost sight of.

Before entering the various discussions on religion, it may be worth while to give here the fundamental concept of religion, as the development of spiritual personality, as I understand it. This may be regarded as a brief outline picture of what I con-

ceive to be the most essential elements of religion, fragments of which have been taken up in the succeeding chapters in which a question of the conflict of religion with our modern national outlook has been discussed.

Religion, as I understand it, implies the spiritual expression of our personality in a much higher sense than Art, as it is generally understood, though in some of its special aspects Art approaches religion, passes into it or is an important aid to it. Art as spiritual expression may be distinguished from its material translation in audible and visible forms. As spiritual expression it represents the creative activity that manifests itself in sensuous forms, implying an immersion of the inner being in an exhilaration of emotion. The object of representation may be a landscape, beautiful scenes or figures, any emotional complex or character, the sensuous content, be it of colour, sounds, tune or rhythm which gives it its form, is spun out of the creative activity of the mind under the spontaneous direction of an outflow of joy which suffuses the whole creation. When the genius of the artist is such that it can manifest this joy and translate it in sensuous forms in such a manner that it can be enjoyed by others, we have an immortal work of art. The creation of the artist may imitate nature, but it exists on a different plane. The artist's joy in his creation emanates from an inner spring which is free from all animality and dissociated from all animal needs. There is a parable in the Upaniṣads, the most sacred literature of the Hindus, in which two birds take part in the same action, mutually helping each other. They sit amicably on the same tree, yet one eats the fruits of the tree, while the other tastes nothing, but feels the joy spontaneously. The poet may sing his song on the bitterest experience of his life, but as soon as the sorrow takes the artistic form it ceases to be personal, or rather becomes personal to all and therefore universal. Thus the universality of art is no abstract universality. It signifies the presence of a concrete spiritual reality in all to whom the appeal of art is made. It is this spiritual reality in the poet that transforms his animal feelings, be they sorrowful or pleasurable, into the artist's joy and utilises the materials of his experience, intellectual, or sensuous, for the creation of the artistic form through

which it may manifest itself. The creative activity, order, method, choice of materials, their manifestation, due proportion and form, though they manifest themselves through the intellectual apparatus, are all guided and controlled by the inner spiritual being whose content is always beyond the intellectual plane. But though this spiritual being continually manifests itself in moulding the elements of our experience-complex in the interest of the creation of the artistic form, yet it is always not only beyond the animal man, but also beyond the intellectual man. Being in thought and sense it is superior to them. The internal logic of artistic activity is thus transcendental or mystical. It is the inner controller (*antar-yāmin*), of which the Kenopaniṣad says that it "weaves the functions of the mind, but the mind does not know it".

The artistic form conceals within itself the life of the inner spirit. When it passes over to another through some channel it creates in him a corresponding form. Through it his inner spirit manifests itself in joy, and this joy overcomes the animal and intellectual obstruction of the individual that had separated him from the artist, so in the manifestation and enlightenment of the spiritual joy the individual becomes one with the artist and with all others who may be appreciating the artistic work. Thus the secret of art communication lies in the revelation of the spirit in joy, which, like a burning torch is carried to the heart of another and sets free his spirit, and in the effulgence of illumination burns away his egoistic self which had separated him like a shell, from the artist's person and had created an obstructive individuality. In artistic creation and appreciation we have a field in which spiritual realities become awakened, and we are suffused with radiant joy and beauty and come into communion with kindred spirits enjoying the same kind of experience. All sense of utility, personal advantage and the craving for egoistic satisfaction cease for the moment and we feel ourselves to be in an entirely different world. But this illumination of the spirit through art is by means of the sensuous content of the moment, and the awakening of spiritual joy and fellowship is, therefore, bounded by the limitations of sense-ideas and this touches our whole being only remotely.

The presence of a spiritual principle in man, illustrated by art-experience, is the bedrock of religion. The fundamental aim of religion is to secure a supreme awakening of this spiritual principle. In religion, however, it is not, as in art, a momentary flash produced by a sensuous content. The religious impulse is realised through all the complexities of our whole being, in our conscious and sub-conscious mental spheres; it is in all our emotional and volitional manifestations and determinations. Religion is art in the deepest and widest sense of the term. It emerges as an activity of the spirit in its self-expression through the whole of our personality. By personality, I mean here our entire complex structure, including our biological or animal tendencies. It includes within it our cravings, temperament, character, emotions, emotional outlook, will and conduct, in fact, the totality of our inter-related experiences and their potential tendencies. This personality has in it a potential and an actual aspect. In religious activity the spirit strives to reveal itself in and through the entire personality. Just as in art-activity, the sensuous content involving concrete ideas, images, words, colours and their complex order must be so arranged or transformed that the spirit may find in them a proper form of self-expression, so in religion the entire personality must be so worked upon and transformed that it may prove itself a suitable vehicle for self-expression, even as a creeper blossoms into beautiful flowers and a tree sweetens itself into its fruits.

One of the chief characteristics of art is sympathy. A poet or a painter is in sympathy with nature and with man. By sympathy here, I mean attachment or love. A poet surveys tenderly the scenes and events in the life of nature and the characters and situations in human life. To him inert nature is pregnant with spirits and he dallies with it as with human beings. He transports man from amidst the economic and animal struggles to a higher level and invests him with a spiritual meaning. The affairs of men and the conflicts of characters and interests, appear to him in a new perspective. He clothes them with his own joy. He rejoices in the revelation of his own spirit and invests all those, through whom or in association with whom the revelation is made, with a like joy. The Upaniṣads say that a

brother, sister, wife or son is dear to us because the self is dear to us. The joy of all things is through their association with, and revelation through, the Self. When this association is through the animal self, we have animal or egotistical pleasures, when it is through the higher spiritual self, we have disinterested aesthetic pleasure or joy of art. The Upaniṣads say that when the spirit within the self awakes, the winds become honeyed, the rivers flow honeyed, the nights and days are honeyed and even the dust appears sweet.

The spiritual principle realised in artistic experience may well lead us to a belief in the concrete spiritual principle revealed through religious experience. Through it we may get additional insight into the method by which the spiritual principle works and transforms our personality and determines our attitude towards nature and man. The difference between the mode of activity of the spirit in the two spheres is primarily regarding the materials for transformations. In art the spiritual principle transforms merely certain specific sensuous contents of the mind and reveals itself under their limitations. In religion the transformation affects the whole personality. Thus art from one point of view, is only imperfect religion, and as such it is utilized in the service of the latter in the form of various kinds of rituals, images, altars, songs, dances, music, stories and the like.

The fundamental purpose of religion is the spiritual fellowship of man on a non-utilitarian plane. This is, however, only imperfectly secured through the sensuous content used in the service of religion by the members of a particular religious fraternity.

When the unification implied in rituals is misapplied for utilitarian or social ends, a religion may descend into fanaticism or worse forms of egotism, so well-illustrated by the religious history of the world. Hinduism no doubt employs various forms of rituals, but here the fact is continually emphasised that the sensuous representations in rituals and images must always be inspired by the ultimate concept of religion. Without this all rituals and all images lose their significance and become false. Rituals without the true spirit of religion are like limbs in a

lifeless body. The purpose for which they are employed must continually be clear before the mind until the sensuous representations become unnecessary.

The subsistence of a spiritual principle in man is testified not only by religious experience but also through artistic expression. Like the artistic genius its revelation may manifest itself in a greater or lesser degree in this or that religious genius, but its reality as a dominating influence in moulding the lives of us all cannot be denied. It is true that its defining content cannot be looked for within either, in the sense data or the purely intellectual elements of the mind; but that it only shows that the spiritual principle revealed in religion belongs to a higher plane. The Upaniṣads demonstrate in parables that things may exist though they may not be grasped by the senses or the intellect. The seed of a banyan tree is very small and when we split it, we can see nothing inside it; yet it contains the life principle which can unfold itself into a great tree. A lump of sugar when dissolved in water cannot be seen but it is still there and can be tasted. So, the spiritual principle of man is revealed through inner experience and in the moulding influence that it exerts on his entire personality by transforming it into a suitable vehicle for its expression. It is neither knowledge, nor emotion, nor will, but it expresses itself through them all as their inner controller and moulder. Being in them, it is beyond them. It is due to the urge of an activity which becomes emergent in the highest plane of a man's psychic life.

The concept of immortality cannot be applied to our bodies. It can only be applied to the spiritual urge within us which reveals its nature through an inner intuitive enlightenment. This enlightenment is concrete yet homogeneous. We cannot conceive of it as being due to the collocation of parts. We can, therefore, conceive of its non-appearance in a particular focus, but not its disintegration. It lies deep in the cavern of the heart, as it were, self-revealed through its own radiance but unrevealed by the ordinary cognitive ways of knowledge. In this aspect its subsistence is mystical, but its concrete reality can be directly experienced and felt. Belief in immortality means the awakening in man of his true nature as spirit. It is the spirit alone

that has no content in itself, except so far as it may reveal itself through the content of our personality. It is a pure form, a pure emergent urge. All seeming changes in the spirit occur only through its association with the personality through which it is reflected. Our immortal nature can only be realised through the intuitive awakening of spiritual reality.

The concept of change is the concept of death, and the concept of immortality implies the concept of changelessness. The spiritual principle, however it may be enmeshed, as it were, by the different conditions of our personality, is one in all men. It is not a mere abstraction. It is concrete, spontaneous, free individuality as a pure emergent urge. It contains within itself the final fulfilment of the urge of inorganic matter for life and of life for mind, and of mind as running forward towards an ultimate apex, the nature of which always eludes any conceptual grasp. The mind can only catch reflection of it, explained in terms of the urge that is felt in our personality both as an enlightenment and as recognition of its equal manifestation in other human beings. One of the most fundamental modes of self-expression must be towards the recognition of the equality of all, freedom of all and sanctity of all. Every man has an equal right to the development of his capacities, the attainment of happiness, and everything else that these may imply. The religious spirit is not satisfied merely with the recognition of such rights as is demanded by ethics. It calls for the positive development of fellowship and love. Love all men as thyself, should be the watchword of every religion.

All anti-social ideas, all ideas of self-aggrandisement, jealousy, hatred, pride and vanity arise from a reflection of the instinctive elements inherent in the animal attitude of man in the mind. The animal instincts for struggle for existence, for self-preservation and race-preservation become magnified when they appear in the mind of man. While the animal is interested to satisfy his immediate hunger, man imagines an infinite amount of hunger extending over an infinite amount of time, and this leads him to his desires for hoarding which represent a great bulk of his economic desires. With the animal, hunger and fear are limited to time and space. Thus the animal instincts, as they

appear reflected in the mind of man, become thousandfold multiplied and attain a force unknown to the animal world. It is this that separate man from man by creating conflicts unknown to the animal world. It is a social instinct of man culminating in a high sense of morality that counter-balances the spirit of conflict. But, as we have said before, the rational ground of morality must lose itself in the experience of a spiritual urge as is found in religion in order that it may be effective.

Moral science when abstracted from religion, fails to justify its claim as an exact science. The application of standards in any of their divergent forms fails in logical coherence and also in explaining the problem of practical morality, which, when their nature is discussed merely from a speculative point of view presents insurmountable difficulties. All pleasure theories contradict themselves by the assumption of qualitative standards, and there is a practical impossibility of the calculus of the greatest happiness of the greatest numbers. Rigid theories show themselves to be meaningless on account of the voidness of the content and the contradiction in which they plunged. They deny practically the place of all emotions on the one hand, and are yet forced on the other hand, to introduce them by the back door. All social theories of ethics fail in the problem of the circular inter-dependence of the individual and the society on each other. Everywhere the comparative claims of egoism and altruism remain unsettled. The supreme justification of the ethical principle escapes us in our abstract speculation of ethics, because ethics is treated merely as a normative science. Morality is like a flower that blossoms on the plant of religion and loses its true significance when separated from it. Morality pre-supposes society, and society means the recognition of the fellowship of all human beings. The fundamental fact of religion is the recognition of the spirituality of man. This recognition is not a metaphysical postulate or merely an intellectual concept. It is the realisation of an emergent urge that arises from the moulding of our entire personality, involving thought, feeling and will. The morality that follows from such a religious experience does not involve any splitting of our personality as we find in the treatment of morality studied purely as a norma-

tive science dissociated from religion. Morality must have to be grounded upon an experience which is higher than a study of our duties and obligations. No assertion regarding our duties and obligations can be self-consistent in an absolute manner. It has to depend upon some other experience which is its ground and basis. Any insistence on the opposition of inclination to will as a defining content of morality must give rise to many logical and psychological difficulties. The opposition must be reconciled in the life of a richer experience which stands by itself. The higher morality, which flows from religion, is not satisfied with the equal treatment of others, nor in regarding each man as a sufficient end to himself, nor even with an intellectual appreciation of oneness, but only with intense feelings of love, friendship and compassion.

Actions are no longer separable from the total personality, but are only the external consequences of an inner transformation, in consonance with the revelation of the spirit in us and through others. Universal friendship, universal charity, universal compassion, imperturbability of temper at the defects of others and the feelings of happiness at the hapiness of others are the cardinal principles of Hinduism, Buddhism and Christianity, from which all morality may proceed without conflict. The sphere of ordinary morality is often limited to particular societies or nations, but the scope of religious morality in its true sense is unrestricted by the limitations of races, societies, creeds and the like. It proceeds from a positive outflow of love. A truly religious man is in love, peace and friendship with the whole world, for him the obligation of morality has given place to spontaneous sympathy The difference between art and religion is that while the former is satisfied with sympathy so far as it can be manifested through the limited sensuous content of aesthetic creations, the sympathy of religion is the result of the transformation of our whole personality, a religious creation by which we recognise our fellowship with all.

As creative art may have in it an emphasis on the intellectual or the emotional content, so, in diverse religious creations we find the different aspects of our personality emphasised in different ways. Thus in a monistic religion like the Vedānta,

as interpreted by Śaṅkara, the emphasis is on the realisation of the true nature of the spirit as the pure consciousness, the one in all. The realisation of this unique reality infinite, and unlimited, is only possible when one awakens within oneself the true philosophic wisdom. But such an awakening is only possible when one succeeds in dissociating oneself from all attachments to the obstructive, egoistic, animal functions that separate man from his fellow beings by drawing him to the levels of his lower personality from where, being still under the bonds of passions, he cannot attain true spiritual freedom. In most forms of devotional religion there is either a feeling of unity with God through love, or a feeling of supreme dependence on Him amounting to an absolute identification of one's will and personality with that of God through love.

Under the influence of spiritual urge involved in religion, the elements of our personality are continually undergoing change, and expressing themselves as experience in association with our fellow beings and the external world. The culmination of the evolution of our experiences is the revelation of the religious man as the realisation of the nature of the content of the spiritual principle in one's own individuality and that of others.

The moral elevation aimed at religion involves a thorough transformation of one's own nature and personality in the interest of self-illumination of one's spiritual nature. The recognition of a transcendent nature of the spiritual urge is the revelation of God in man. Looked at from the transcendent point of view, God may appear as the personified reality of our spiritual urge, as our father and master from whom we have emanated like sparks from fire.

An important modification of religion may be seen when the spiritual situation involved in religion, is realised through the intimate terms of human relationship. The heart of the devotee is supposed to surge from within and fill his own being with genuine love for his master, father, friend or lover, the supreme Lord, both of himself and of the universe. The devotee's love for his master is so great that he calls nothing his own. He resigns to God not only all his material possessions, but all his inner attachments also. All his impurities are burnt away by

this great love. Within and without he becomes filled with one sweet emotion that renders him dear to everyone and endears all to him. The image of his Lord fills the world and his whole being pulsates with divine emotion.

> "To get so much is still to ask for more
> The unfathomed ocean's voice is in his heart,
> The Lord's bewitching beauty lights his eyes.
> Music enchants, his spirit floats on wings
> His Lord's caressing touch completes the joy
> And, loving thus, the saint awakes in God.
> And through Him, wakes in man, and, wakening thus
> Senses again, in man, an awakened God.
> So, spiritual progress in a cycle moves
> From God to man and back again to God.
> Thus is man free to enjoy spontaneous life
> Which blooms into a flower, and, blossoming so,
> Binds man and God in one sweet, fragrant whole."

Whatever may be the ultimate nature of the world-stuff, be it space, energy, or anything else indeterminable in its own nature, we find that energy, be it potential or kinetic, be it waves, corpuscles or ubiquitous, forms somehow the essence of matter in its lowest stage. In the inorganic nature we find various manifestations of energy in diverse forms acting in accordance with strict mathematical laws into the nature of which we cannot enter in our present discussion. Whatever may be the nature of this ultimate matter or reality, we find, that under certain conditions, quite unaccountably it reveals an urge towards the manifestation of the phenomenon of life which in an unknown manner utilises all the secret properties of matter for its own benefit. The plane of life reveals a new pattern which cannot be regarded merely as a product of the properties of matter. In the evolution of life from the stage of matter, the so-called matter transcends itself and makes itself subservient to the unconscious end or purpose of life. Yet there cannot be any manifestation of life without bodies to support it. The materials of these bodies are all collected from inorganic matter which are unaccountably so worked up that they may become

suitable vehicles of life from the uni-cellular to the multi-cellular, from the multi-cellular to the mammals and from mammals to man, in devious ways of evolution and development. At the first stage of the emergence of life either as a bacteria, amoeba or microbe we cannot presume the previous activity of any life principle, for, in that case we have to assume the life principle as a co-ordinated principle of activity which works upon matter but has itself a bodyless existence. We have no proof of the existence of such a self-abiding and self-subsisting vital principle which may be supposed to work upon matter as a *Dieu ex machina* from outside. We have thus to admit that somehow under certain conditions there emerges from matter a self-co-ordinating, self-regulating, self-reproducing and self-sustaining activity which works in a unique and homogeneous manner upon the material datum of life and the environment for the benefit of the organism as a whole and its future re-production. As we pass through the infinite varieties of life-forms as revealed in the plant world and the various kinds of animals, we find new patterns of life evolving in new types of bodies which are not only engaged in self-maintenance but also in self-reproduction of the species. Yet in and through the diverse forms of life we may discover some sort of continuous link, which in spite of the gaps, may justify us to believe in a course of continual evolution in which each concrete pattern of life behaves similarly to other patterns of life performing different kinds of functions with reference to the organisms concerned and their environments.

Though with reference to the material elements in the bodies of the organisms and the animals, the law of conservation of energy and the other physico-chemical laws may be duly fulfilled, yet with reference to life, its origin and behaviour within the organism and with reference to the environment with which it is related, nothing can be properly explained. Biology has a concept which is entirely different from the concept of Physics and Chemistry. Even the dictum of *ex nihilo nihil fit* is not applicable in the field of the emergence of life from non-life or even in the field of the variation of the species under the mutual action and re-action of the organism and the environment.

We thus see that the urge of energy in the inorganic sphere

was absolutely predictable inasmuch as the scope of its manifestations was strictly limited by mathematical laws. The pattern of energy levels and energy-forms in this sphere was almost absolutely determinate. The task of science in that sphere consisted in discovering these forms and inter-relating them. But in the biological plane we discover that depending upon the resources of the material forms of energy and their mutual relations a new type and a new series of patterns was released, which displayed entirely new forms of behaviour, though these depended upon the pattern of its physical basis from which the new emergent plane of life cannot be dissociated and with which it has diverse types of co-relation and correspondence which has remained largely undiscovered up to the present time. But even if we could presume that these co-relations had been discovered, the phenomena of life would still reveal a new form of urge integrating the part with the whole and the whole with the environment in ever-varying patterns of manifestation throughout the course of the evolutionary history. Why each cell should co-operate with other cells, or each vital part of an organism should co-operate with other vital parts for their mutual benefit and for the benefit of the organism as a whole and why the organism as a whole should try for its self-preservation by its re-action for and against the environment, and why should the organism try to preserve its own race or species even when it undergoes much suffering cannot be explained. The teleology or purposiveness that is manifested in the different forms of life-urge in the different patterns of life is a wholly new phenomenon in the emergent plane of life.

Things become more complicated as the pattern of life begins to reveal higher grades of instincts ultimately culminating in human intelligence. Instinct as it appears even in such animals as ants, wasps or birds not only implies an urge of activity in the interest of the insect or the bird, but it is curious to note that such urges contain in themselves a whole series of complex actions unguided by previous experience. The instinctive behaviour displays a whole series of complex actions adapted to specific ends without any pre-judgment for definite consciousness of purposiveness. How an instinctive urge, which is apparently

blind, can culminate itself in the fruition of a complex, purposive behaviour is wholly inexplicable. Here we have a well-marked appearance of a new level of purposiveness which emerges from a pattern of life. Different patterns of life show different forms of instinctive behaviour which become more and more markedly complex as we ascend the upper levels of living beings in the evolutionary history.

In man, side by side with the instincts a new plane emerges which we call mind. For us mind is not a definite entity but it is the concretised name for the various kinds of psychological, logical and other kinds of mental activity, including memory and attention. Quite a large number of our biological tendencies and our instinctive passions attain a new meaning and value as they are reflected in the mind and appear in a highly augmented form. The urge of life in lower stages reveals itself as conscious purpose and conscious adaptation of acts to ends in the mental sphere. In the mental sphere many non-biological activities appear in the form of pursuit of knowledge which in the lower stages could show itself only in dumb forms of curiosity and wonder.

One of the most important and fundamental fact in the human stage is the emergence of diverse types of value-sense, grasped consciously. This value-sense marks the purposive adaptation of our thoughts and actions directed to particular ends. The simplest description of the term value is the attribution to anything of a character in its aspect of being desirable or desired by us. Everything that we desire has a value for us. Whatever satisfies a want, a craving, a demand, or an urge, may be supposed to have a value for us. Thus the satisfaction of our wants in connection with the maintenance of our lives, the enjoyment of sensuous comforts and the means thereto may be supposed to have economic value. In association with these there may arise in us various kinds of passions such as jealousy, hatred, ambition and the like, satisfaction of which may be supposed to have a value which in absence of a better term we may call passion value. Our intelligence and the attainment of knowledge so far as they are useful for the satisfaction of the economic needs or the fulfilment of passions may be regarded as

falling under the economic value or the passion value for the fulfilment of which they are the means. But our urge for knowledge, for the attainment of scientific and philosophic truth, which are absolutely independent of the biological or the semi-biological needs as expressed in the economic value and the passion-value has a value of an entirely different status, and may be regarded as having a value corresponding to our yearning for knowledge for its own sake. This stage marks the emergence of a value-sense which is almost wholly unconnected with our animal wants and passions. So also we have a moral value which manifests itself in our inner demand in which we refuse to give any importance to the satisfaction of our egoistic desire in preference to those of others. The nature of this demand urges us to look upon humanity in an unselfish and universal manner. The demand suggested by this value-sense is that we should act according to a rule which we must be able to universalise at the same time and in which personal preference is ignored. The biological preference to our own individual selves, to which we were trained throughout our animal history is here forsaken. Here, there is an emergence of a value-sense which may be regarded as being in some sense anti-biological. It is associated with an experience of satisfaction the root of which lies in the capacity of identifying ourselves with a particular society, nation or humanity. We have in us, again, another type of value-sense which is associated with our inner urge for beauty, creation of beauty and appreciation of beauty. This may be called the aesthetic value, and its satisfaction, aesthetic satisfaction. Each value-sense implies an urge and also a corresponding satisfaction on the fulfilment of the urge. The last three kinds of value-sense, the cognitive, moral and aesthetic, emerge only in the human stage. There is another type of value-sense which is manifested in our apperception of religious value par excellence. The satisfaction of our religious sense at its highest implies an urge which includes within it the universalisation involved in our cognitive, moral and aesthetic value-sense. The urge of the religious sense involves the directing of the mind to a universal aspect of things involving man in relation to nature and also to God. In our cognitive value-sense as found

satisfied in scientific investigations we try to discover universal laws in different departments of knowledge and thereby by working through different types of universal laws. We unconsciously strive to discover some universal law of which other laws may be regarded as corollaries. In the other aspect of the cognitive urge we have philosophy which does not work through details, but which strives to attain a rational understanding of the nature of our being, our environment and the final reality. In our moral urge we try to subordinate our selfish, animal and individual cravings to the achievement of the well-being of the society, nation or the humanity. In our aesthetic urge we try to transcend our individual passions limited to the time, place and the particular ego and attain the universal aspects of our experience through an aesthetic emotion which is universal. It may be associated with emotions in relation to sensuous contents and sensuous experiences, but art attains its fulfilment only when it can universalise the emotion, so as to make it enjoyable not to the poet or the artist but to the humanity at large. The aesthetic joy is the joy which is wholly unassociated with any sense of utility and which is not the individual joy of the poet or painter but the joy of the universal man that lies in all of us.

We have seen above that the urge of our religious value-sense needs a field of operation and a special kind of activity and in that sense it may be compared with our aesthetic activity. The field of operation of our religious urge involves within it the whole of our psychic being and our environment as society and nature. In thought, will and emotion it implies an activity for the re-creation of our whole being in consonance with the religious urge. The mode in which this re-creating activity of religion should operate is implicitly found in our religious urge par excellence and the satisfaction that is associated with the fulfilment of the urge guarantees the proper discharge of this religious activity. This religious urge is the basis of the unification of the other three kinds of urge, the cognitive, the moral and the aesthetic. It implies the harmonious blending of knowledge, will and emotion. It is not a barren urge that is merely a form and as such contentless, but like other urges it is associated with a special kind of experience, which in

absense of a better word, we call spiritual experience. It also involves a special type of satisfaction, which in absence of a better word, we call spiritual enjoyment.

One of the special ways in which the religious activity projects itself towards its ideal is found in the concept of God. God represents within Himself the ultimate reality in the sense that the whole history of the urge from the inorganic to the organic and from organic to man is but the history of the evolution of God in Himself. It is in this way that we can conceive our God as being the Controller of the world and of ourselves, and it is in this way that we can think of ourselves and nature as being one with God or as being within Him. The Christian idea of the Holy Ghost may be interpreted from our point of view as being the emergence of the supreme value-sense manifested in our religious sense through which we can unify our nature as knowledge, will and consciousness with God. It is through the emergence of this Holy Ghost in our religious experience that we can realise the true foundation of morality in love of God and love of man. In those types of religious consciousness in which God is projected as the ultimate reality and the ideal, we have special types of spiritual expression as illustrated in the experience of the mystics. This however, should not for a moment lead us to think that the projection or the experience of God in the human consciousness is merely a subjective ejection, illusion or hallucination. The concept is the culmination of a history and its fulfilment, and it is the basis of all our experience. If the final religious urge is denied, we can find no reason for explaining the cosmic urge manifesting itself in the history of the world and history of man. The final fulfilment of the development of the historic urge in diverse ways at different levels of emergence finds its ultimate fulfilment in the satisfaction of the religious urge beyond which all experience fails. The religious urge, however, is not necessarily limited to the projection of God as different from us, but it is satisfied by the re-creation of our whole being and personality in accordance with an ideal, the truth of which is guaranteed by the spiritual experience and enjoyment associated with it.

CHAPTER II

IN WHAT SENSE CAN THERE BE AN EVOLUTION OF RELIGION?

Man is not only a religious animal, but probably the only animal who knows how to wonder at things. Some theorists on religion have said that religion has proceeded from wonder. Whether this is so or not is a long question, which I must now leave out. But it is probably true that even in the most primitive stages, man had admired and wondered. His admiration was the first manifestation of sentiments which at a more developed stage appeared as the aesthetic sentiment, and this wonder and curiosity led him later on to his philosophy, his religion and his science. Wonder implies a discrepancy between the 'seen' and the 'expected'. This at once implies a very indistinct assumption that what is seen must be corroborated with what is expected, or that the mental law, the law of thought was such that no experience could baffle it. If there is a seeming contradiction, the fault must be in what we have seen or that there is an inadequacy in the perception before us or there is an inadequacy in the full import of our thought, that we have not realised to the full extent, the necessity of our thought and have thus wrongly expected. I do not say, however, that the primitive man becomes conscious of the mighty potentialities of thought, to which experience must conform. But in the infant structure of his thought, there is somewhere a ring or a tune to that effect. This leads him to assume entities or realities, powers or beings which he cannot experience but of which he becomes sure, by the very necessity of his thought.

When the vedic people saw the firmament with its infinite spangling stars, the sun and the moon passing and rolling on its surface from the East to the West, when the firmament remained firm and unshaken, high aloft, they were filled with wonder:—

why is it that when everything falls down, the firmament does not fall, and he asked himself who is it that holds this mighty space? As we wake up to the morning light with the various colours and forms of creations, the symphonies of the music of the birds and sun-shine frolicking over the emerald grass; see the birds twittering about in the sky, butterflies drinking honey from the cups of leaves, and men rushing out to their work, we think of the night when we are all laid down under the shadowy shroud of slumber, when every colour was effaced from the face of the earth and all forms had vanished away in the nothingness of darkness and of sleep. We are led to think that creation must have proceeded from such a chaos of darkness which had drowned everything within its womb. As the primitive vedic man thought of it, he asked himself, how did the creation come?—It could not come out of nothingness. He felt himself unable to answer the question and he doubted if there was any one who could answer it. Has this world a master, a creator, or has it not? Even if there is—does he know how creation came out? The speculator in the land of Israel also asked himself the similar questions, but he found an easy answer. He said, 'God said, let there be light and there was light!' From out of the chaos of nothingness God created the world, and he created Adam, but to create Eve he required a piece of a bone of Adam.

When we read the vedic hymns, we find the vedic people wondering at the natural phenomena of storm, thunder, shower of rains, the blowing of winds, the ushering in of the dawn, the flowing of rivers and the amassing of clouds, and they asked themselves about the reason 'why'. To their primitive minds motion only appeared to belong to life, and they attributed the changing phenomena of nature to living deities presiding over the diverse forces. Having presumed them to be deities, they naturally regarded them as being mightier than man. They attributed particular characters to these deities and worshipped them. The materials of worship were the food that they themselves ate. They immolated animals and offered them to their gods and partook of them by way of satisfying the gods. Frazer, who is an authority on primitive customs and faith, defines religion, as propitiation or conciliation of powers superior to man

which are believed to direct and control the course of nature and of human life. Thus defined, religion consists of two elements, a theoretical and a practical, namely, a belief in powers higher than man and an attempt to propitiate or please them.' The primitive men civilized and uncivilized, peopled the world and the heavens with the deities, angels, spirits and ghosts. God came in a semi-visible form and held covenants with His prophets, delivered His commandments, sent His angels to communicate to His messenger, kept records of His commandments and revelations in Heaven; He had the earthly copy of His revelation compared with the heavenly copy. He moved His prophets with fiery ecstasy when they declared their prophesies or delivered His messages. Not only did God Himself perform miracles, but even His prophets healed the sick, walked over the sea, made predictions about the rise and fall of kingdoms, and for the sake of God's prophets the sea heaved apart to make a highway and closed up again, for the destruction of their enemy. In fact no one in ancient days was regarded a prophet or a messenger of God unless he could show miracles. Jesus died on the cross like an ordinary mortal, but rose from the grave such as no man ever did. Dreams, oracles, omens and portents were always at the service of men to conduct them in their future dealings. Man seems to be in direct communication with the unseen powers. Both in the Hindu and the Greek legends the gods and men helped each other and gods often married the daughters of men. Men not only had intercourse with the invisible powers, but magical formulae and magical rituals were regarded as having the power of controlling the phenomena of nature and of men, of routing an enemy, or getting a son, or of preventing a famine in a season of drought by causing a heavy shower of rain. Among the Egyptians the mere entombing of the magic formulae had the effect of securing remission of the sins of the person.

A miracle has been defined as 'an occasional evidence of direct divine power in an action, striking and unusual, yet by its beneficience pointing to the goodness of God'. Miracles as such are to be distinguished from thaumaturgic powers in exercising similar wonders as may be done by sorcerers, which are

displayed in the interest of particular persons. It is supposed that there is nothing contrary to nature in the happening of the miracles for nature behaves as it does, in accordance with God's will. The forces of nature are plastic in the hands of God. Therefore God is at liberty to perform any miracles that it may please Him to do. If God's will is regarded as ultimate agent, there is nothing uncommon in the happening of the miraculous in accordance with God's will. But if in the miraculous such an explanation may be offered, no explanation is possible in the case of magical or thaumaturgical or shamanistic miracles, which may be worked out by individuals and which are in essence as miraculous as the miracles supposed to be performed by God.

A few things emerge out of the foregoing considerations. Religion in a way occupied the same place as science does in our time. All phenomena of nature were worked by unseen deities or invisible powers of God. The supposition of these beings behind all phenomena relieve the logical tension of the mind prone to seek the causes of events. The wonder as to what may be the causes of the things that we perceive, was satisfied by these assumptions, and the mind did not feel any contradiction to the existence of divinities, not only behind the natural phenomena but also in the stones and trees and the images of earth, wood or stone. But it was not enough that the normal phenomena of the world should be explained on the assumption of supernatural divinities, but we should have power to handle these powers behind us to our interest. As a means thereto we hear of the miraculous healing as a result of prayers of temple—sleeping or lying down in the temple, which terminated in dreams or direction in dreams leading to the healing of the desired person. Prayers are also believed not only to relieve various kinds of sufferings, but also to work out diverse other kinds of miracles, but not all people were content to depend upon the grace of divinity, in response to prayers. Magic and thaumaturgy or sorcery were the powers that the specially adept among the primitives possessed, by which they could change the order of nature and produce what they desired. Religion thus served not only to satisfy intellectual

curiosity as to causes of things, but also it served to bring about the desired practical end.

But religion had thus not only a practical end through magic and miracle in the primitive stage, but in the advanced religion we always find moral and ethical codes of conduct which are regarded as commandments of God, which men must obey in order that they may be dear to God or gods. The evolution of such moral and ethical courses of conduct as forming part of religion is found not only among the religions of the civilised people, but often among many uncivilised people as well. The fierce tribe called the 'Paharees' of Rajmahal, who neither cultivate nor tend cattle, live only by their predatory habits of plundering the people of the valley. Under the British Government a corps of light infantry was specially organised to keep them in order, they are so turbulent that in 1796 they were brought under the non-regulation system. They are consanguinous to the Oraons. Now these people have a code of ethics which is too high for the course of life they lead. This runs as follows·—"Whoever obeys God's commandments will behave well in all respects. He will neither injure, abuse, beat, nor kill any one, nor rob, nor steal, nor waste food or clothes, nor quarrel, he will praise God morning and evening, and the women must do that too. When a good man has lived this life as God pleases, God sends for him and says, 'You have behaved well, and have kept my commandments and I will exalt you, but for a season you must remain with me." The object of this sojourn is not stated, but when it is completed, the spirit of the good man is remitted to earth, to be born again of a woman as a Raja or chief, or in some higher position than that he previously held. If he shows himself unmindful or ungrateful in his exaltation, his days are cut short, and he is born again as an inferior animal."

Again, Frazer, speaking of the taboos observed by the Eskimos after killing sea beasts, says that the object of the observance of these taboos is not only to prevent the souls of the slain animals from extracting certain attachments which would not only hurt them, but also hurt the great goddess Sedna in whose house the disembodied souls of the sea-beasts resided.

For the expiation of the mischief, that may be produced by the commission of those acts which are tabooed, the transgressor confesses his actions. It has come to be an act required by custom and morals to confess any and every transgression of a taboo in order to protect the community from the evil influence of contact with the evil-doer. This confession is done, according to Frazer, for the purpose of propitiating the powerful goddess rather than as merely for letting others know of their committing the tabooed acts, so that they might not be polluted by touching them. The force of the taboo is derived from the idea of violating the will of the great goddess. The old savage taboos resting on a theory of the direct relations of living creatures to one another remained in substance unchanged. But they are outwardly transformed into ethical precepts with a religious and supernatural sanction. The confession here is a sort of moral purgative. It is probable that originally the violation of the taboo or the sin was regarded as productive of some morbid material substance, lurking in the sinner's body, from which it could be expelled by confession as by a sort of spiritual purge. This is confirmed by the form of oracular confession practised by the Kikuyu of British East Africa Amongst them sin is remissible by confession. The sorcerers showed the process of the emission of the sin by making the sinner vomit along with confession. These Kikuyu also removed their sins by passing them off to a scape goat. Thus a Kikuyu committing incest is sure to die of a disease. He therefore, transfers his sins to a scape goat and when the throat of the animal is cut, the man is purged of his sins. For this reason confession of sins is regarded as means of curing the sick man among many primitive races, who believe sickness to be due to sins. Women in hard labour pains often make confession for easy delivery. I need not multiply examples, but I may point out that among the Assyro-Babylonians, Egyptians and the Hindus and the Jews sin has often been believed to cause sickness. Among the Assyro-Babylonians, sickness is the only consequence of sin, and confession is supposed to remove them. The power of confession and repentance to remove sins is one of the fundamental creeds of Christianity. We thus

see that not only in the civilised religions, but also among many uncivilised people, the wrong actions are believed to be transgressions of the commands of God, and confessions and repentance are sometimes believed to remove sins by their magical effects and sometimes by appeasing the wrath of God for the violation of His commands. We thus see that the idea of God or gods does not make any appearance in religion, merely as a scientific or metaphysical cause or creator of the world, but also as a protector of the socio-ethical system. It is true that the taboos in primitive life do not always represent an ethical good or evil, but they somehow represent the idea of a mischief. It is believed by the primitive people that the king or the priest ran into special dangers regarding the protection of their lives, and the observation of the taboos was intended to save their lives. The savages generally conceived the human soul as a Manikin, the prolonged absence of which from the body caused death. The idea of soul among the savages was generally that of a Manikin residing in the bigger body. This is found not only among the Australians, Malayas, some people of Sumatra, Fiji and other places, but also among the more civilised people; the Egyptians or the Hindus had a similar belief.[1] It is needless here to go into the various details of the attempts that were made by the primitive people to prevent the soul from escaping through any of the apertures of the body. Even to-day the remnants of the primitive custom arising out of the fear that the soul might pass away through the mouth at the time of sneezing, is to be found among Hindus and it is prescribed, that at everytime of sneezing other persons sitting by the man should utter the benedictory formula *'Śatam Jīva'* i.e., live for hundred years, and at every time of yawning the individual himself prevents his soul from rushing out of the mouth, by the magical snapping of the fingers. It was also feared that while during the sleep the soul wanders away to various places as represented by dreams, it might not also return to the

[1] Many of the monuments dating from the 18th century B.C. onwards in Egypt represent various kings appearing before divinities, while behind them stands his soul or a little man with the king's features In the Mahābhārata it is said that Yama the king of the dead drew from Satyavān at his death, his soul which was as big as a thumb.

body.[1] For this reason the dusk time, when the ghosts are supposed to assemble in the trees, is regarded as unsuitable for sleeping lest the soul of the sleeper might, in company of the ghosts, be persuaded not to return to the body.[2] The conception, that the souls inhabiting the body are always exposed to dangers, led to the formulation of many rules which if observed, the soul could be preserved from mischief. These are represented in the various kinds of taboos which are found among the civilised and uncivilised people in the past. That the moral transgressions as well as the transgressions against the taboo rules of other spheres, such as restrictions regarding food and drink, or of touching a woman during the periods, or in childbed or a corpse and the like, seem to have evolved from a sense of mischief. It is for this reason that often in the scriptures of older people such as that of the Hindus, the Parsees and the Jews regulations regarding food and drink and defilement appear to have the same force as those regarding social offences of a moral nature. It seems that from an original sense of mischief accruing in consequence of a particular kind of food or drink, or by touching things or persons believed to be unholy, gradually the idea of sin grew, and in the scriptures of most of the ancient peoples the moral sin is not distinguished from the sin accruing by the non-observance of the rules of taboo of other kinds. The primitive idea of sin was that it was some sort of material that corrupts a person, produces sickness, makes one amenable to bad fortunes and may also stick to a person and produce misery even after death in the ghostly condition of the soul or in hell. Even in such an advanced philosophical system as that of the Jains, it is held that the sin is a sort of impurity which sticks to the soul and stains it with diverse colours. These ideas of sin are also found among the Assyro-Babylonians and the Egyptians and also among the Hebrews. Among the Egyptians the souls were actually weighed after death and the sins increased their weight. The evolution and separation of the notion of moral sins as

[1] This idea is also expressed in the section of dreams in the Vrhadaranyaka Upanisad and Sankara's commentary on it.

[2] This practice is still found among the Hindus.

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distinguished from other kinds of taboos is comparatively of recent growth. But the main interest of the believer was that a soul may not be imperilled. We may therefore, hold that religion fundamentally aims at the good of the self or the soul both in this life and in its post-mortem existence, whatever may be its nature. The ultimate idea of salvation of all Indian systems of religion was either the complete destruction of sorrow or the attainment of perfect blessedness. The main care of religion, therefore, is the soul or the principle of personality.

Most religions agree in the belief, not only in the existence of an independent soul for every individual, but also in its possibility of a durable existence after death. As Frazer says, many of the primitive people in the magic age believed in the immortality of the individual souls. Among the civilised people, opinions seem to be divided. Thus among the Assyro-Babylonians immortality could come only as a gift of the gods. The idea of re-incarnation is suggested by the reappearance of the crops in the rains which died in winter. Among the Greeks also immortality of individuals was introduced through the Eloisyan, and the Dyonesian mystics. With the Egyptians it was a special gift of Osiris. Among the Jews and the Christians and probably also among the Moslems it was believed that the man was created out of nothing. Immortality was a special gift of God. With the Hindus and the Jains the soul was immortal from the very beginning and was regarded as a part of God's nature. According to the tradition of primitive people, human souls transmigrated into various kinds of animals and trees. The idea of transmigration existed also in Greece. The Jātaka stories of Buddha represent how Buddha remembered the story of his passing into various animal and human bodies in successive generations.

We thus find that religion in most of its forms constitutes a system of beliefs, surcharged with emotions, and transforming into actions, in the interest of our temporary and permanent welfare understood as happiness here and beyond. A study of the existing religions as also the religions among the primitive people, or the religions that have passed away, were constituted of beliefs which sprang up on account of our ignor-

ance of scientific knowledge. Thus, for example, the Bible speaks of the creation of the world out of nothing and the separate creation of the different species. The scientific researches of Darwin, Haeckel and others have now convinced the educated people that the world sprang out in a continuous course of changes, from the nebulous state of a hot gaseous mass, and that life sprang up at a particular period in the history of earth's life and that the development of life proceeded on its onward march in a continual series until the evolution of man. The theory of evolution thus strongly repudiates the creation theory. It, therefore, also repudiates the idea that the old Testament is the word of God who is an omniscient being, for, the doctrine of creation, as found in the old Testament, is found definitely false by the modern scientific investigations. Now, if the Bible is not regarded as a Holy book, revealed by God, the validity of most of the teachings of the Bible and the promises contained therein as reward and punishment to the obedience and transgressions of the commands of God, would fail. During the last 200 years, the knowledge that we have stored by observation and experiments and the power, that we have attained by acquiring further knowledge of controlling the forces of nature to our advantage, by the growth of technology and the science of engineering, have been so great that our minds may naturally be unwilling to believe that there were beings with mysterious powers hovering round nature and natural forces. We may also be unprepared to think that the particular divine power has shaped the history and destiny of our world. Everywhere that we look round we find natural forces acting in a definite and measurable manner which repudiates all ideas of the operation of any will behind them. Before the challenging speech of Jehovah, the God, the modern man of science is not easily shaken. He can give a suitable reply to many of Jehovah's questions and he believes that with the passing of time he will unravel most of the mysteries and deprive Jehovah of at least some of his boastful assumptions.

The modern man may not be disposed to pin his faith to any book of the past as being words of God, or to believe in the existence of heaven or hell, or in the possibility of a day of judg-

ment, when God will appear clad with all His glory with Jesus on his right side. The application of the evolutionary method on the vast multitudes of social facts has disclosed to the modern man the growth and history of the social, political and moral institutions and he can trace the etiology of each social and moral phenomenon from customs and practices of primitive people. He has learnt to believe in the growth of our social and moral ideas as having sprung *pari passu* with the growth of our civilisation and culture, and that they have a bearing only on our mundane welfare. Even the very existence of the soul as a separate entity and as having an independent existence may prove doubtful in the face of the psychological and psycho-biological studies of the present day.

Physics with its precise measurement of space and time, with its modern knowledge of the structure of matter, with its methods of making it possible to produce and utilise new forms of energy, ensures the establishment of new relation between human beings and their environment and in the last analysis, the transformation of the environment as well. Physics and Chemistry have lightened the burden of physiology, and bio-physics and biochemistry are trying to determine the reflex conditions and chemical actions of which life and thought may be regarded as functions. The scientific man thus thinks that the time will come, even if it be remote, when mathematical analysis based on natural scientific analysis will embrace in its magnificent formulae all phenomena including the phenomena of life itself.

The study of anthropology and the primitive conditions of man throughout the world, their practices, their beliefs and their customs understood and interpreted as functions of their structure and environment, are daily forcing upon us a naturalistic explanation of religion, and dispelling all the cloud and mystery that used to hover about religion in the past. The knowledge, that is rushing forth from all sides like the glorious beams of the Orient Sun, is daily engendering our faith in the future achievements of man by his own exertions than in the promises made by Jehovah to Moses.

The study of comparative religion is holding before us the structure and composition of various religions in different parts

of the world, in different periods of history and under entirely different conditions. Attention is paid in modern ways of comparative studies, to the importance of physical surroundings such as mountains, plains, deserts and swamps, the proximity of higher and lower cultures, means of inter-communication, food supply, means of livelihood, occupations, such as hunting and agriculture etc., as determining the type of religion. The old Indo-Iranian stock of the Vedic Indians and the Avestans have been supposed to develop two different tendencies of religion, the former as passive, mystical, theistic and metaphysical, and the latter as strictly practical and ethical, and these differences are regarded as functions of the two different lives in two different environments and geographical conditions of two different people. Again, the geographical and other features of Egypt and of Babylonia and Assyria favoured certain unity and fixity of life and thought in contrast to the broken and sea-engulfed lands of the Aegeans and the Hellenic people. In the study of the Greek religion we find a gradual growth of religious institutions which may be regarded as directly due to the growth of political and social life and city cultures. The heroic deeds and the new settlements, that were made in the various islands of Greece, led to the institution of hero-worship. The differences among the various religions may thus be due to many physical factors, environments and development of different types of mental habits, conditions and contiguities of cultures. A distinction can be drawn between the history of religions as belonging to different peoples of different areas. A comparison of the different religions also shows that they have developed from certain principles which are rooted in human nature and which grow in slightly divergent forms under different environments. But every treatment of the development of religious forces leads to some recognition of lower and higher stages such that the lower also is related to our own ideals in a progressive development.

It is interesting to note that in an anthropological study of the development of religions from the primitive social groups to the advanced religions, associated with advanced social groups shows, the fundamental formula of evolution, namely, that most of what is found in the advanced stages is also found in the

lower stages, and that the advancement occurs by a transformation of the more and more homogeneous into the more and more heterogeneous, of the less coherent into more coherent, of the less definite into more definite. This is true of course, of the general tendencies of thought, conduct and customs that are associated with religion. In the primitive stages the differentiation of the different lines of thought and action are not distinguished and separated. The more primitive the stage is, the more are the various social beliefs integrated and undifferentiated with religious beliefs. Thus for example, the beliefs that may be regarded as constituting the basis of a normal Hindu, taboos regarding food and drink and other kinds of impurities, as well as political, civil and criminal laws, as also various customs of marriages and other socio-religious functions and social practices, are somehow involved in the conception of religion. Thus the Smṛti of Manu, which defines the sphere of religion, contains within it various programmes of duties which bind very tightly all the actions of a person from his birth to his death. In this law book of Manu, the various rules of initiation, the observances to be imposed upon the students, the manner of marriage, the daily rites of householders, ancestor-worship, sources of impurity, the duties of the king, civil and criminal law, various taboos regarding food and drink, all come under the concept of *dharma* or religion. Thus from the point of view of sinfulness, a social or moral offence is not distinguished from the transgression of a customary tabooed food. With the evolution of the concept of religion the notions of religion become more definite and concrete and other elements of thought, which are connected with it, come to be distinguished. Every individual is born in a system of beliefs of which divine emanence is claimed, and the belief in particular gods and their relations with human being is also integrated with it. The evolution is not always regular and systematic and it is possible to have in any particular system of social good, the evolution of a particular aspect of thought and beliefs as being much more marked and advanced than the other aspects of the beliefs of the same type. Thus in the Hindu system of thought the moral, social, the customary and the reli-

gious appear all jostled up even in the latest books of Hindu law, whereas the pure religious aspects of thought, namely, that dealing with the relation of God and man had undergone the highest development as is seen from its vast philosophical and religious literature.

Various schools of anthropological studies have tried to enquire into the nature and origin of the primitive religions. Thus Frazer in his Totemism, studies the system both as a religion and as a legal institution, in a descriptive manner without attempting to explain Totemism or to understand its fundamental notions. Already in 1870 the belief was being expressed by Maclennan that most religions sprang originally from certain totemistic practices found in abundance in Australia, and he confused totemism with the cults of animal and plant worship. Robertson Smith in his 'Religion of the Semites' tried to show that the principle of the communion meal was derived from totemism. Since then a large amount of material has been collected by various writers, and the affinity of various customs and practices with totemism has been shown. Among these various studies we can distinguish two important schools, one holding religion to be proceeding out of the very constitution of the human mind as sponsored by Frazer, and the other regarding religion as a product of social phenomena. The former do not seek to locate religions in the social environment, of which they are a part and to differentiate them according to the different environments with which they are connected. They rather go beyond the national and historical differences to the universal and really human basis of the religious life. It is supposed that man has a religious nature in himself by virtue of his own constitution and independently of all social conditions. The other school namely, that of Durkheim, no doubt also regards it as the principal object of the science of religions to find out what the religious nature of man really consists in. But it does not regard religion as a part of the constitutional make-up of man, but rather as the product of social causes. Durkheim, therefore, considers it impossible to determine the nature of religion apart from the social environment. This school is not therefore, interested in comparing the various religious pheno-

mena of widely different countries and races, but only in a concentrated manner of a particular locality, for only such comparisons can be followed.

On the basis of comparative religion various scholars have attempted to give various definitions of religion. Religion has been regarded as a sort of speculation upon all that evade science or distinctive thought, in general. Thus Spencer says that religions are diametrically opposed to their own dogmas and are perfectly at one in the tacit conviction of the existence of the world with all its contents and with all which surrounds it, as a mystery calling for an explanation. He therefore says, that religion is the belief in the omnipresence of something which is inscrutable.[1] In his introduction to the Science of Religion, Max Muller, defines religion "as a struggle to conceive the inconceivable, to utter the unutterable, a longing after the infinite." The supernatural is a negation of the notion of the natural. But the primitive people do not seem to have been able to distinguish the great gap that exists between the natural and that which is not so. For him there is nothing strange, that by a mere word or gesture one would not be able to command the elements or that by a particular magical performance of sacrifice there should not be a heavy shower of rain in the time of drought. The rites which the primitive man employs to assure the fertility of the soil, fecundity of cattles, do not appear to him more irrational than the technical processes which an agriculturist may use in modern times for the same purposes. There is nothing mysterious to him in his rites and rituals. As the force of gravitation or electricity has nothing mysterious about it when we turn them to our uses by our instruments and machines so the primitive man also regarded it as a normal thing that he should control the spirits or the gods behind the natural phenomena by his magic rites. As a matter of fact it appears that the abstraction of physical forces arose from the primitive idea of the control of animistic forces by ritual operations. The reason at that age had no repugnance to admit *a priori* that the so called inanimate bodies should be directed by intelligent powers.

[1] Spencer's First Principles, page 73.

Even in pretty recent times when Leibnitz regarded the world as being full of monads or spiritual entities and at the same time explained all activity as being due to inter-relation of spiritual forces as being the cause of all physical operations, he did not conceive that he was not talking in a rational manner. The distinction between the physical and the spiritual is of so recent a growth that we need not be surprised that the primitive people, who had no fixed notion about the natural order of things, could not have any distinct notion of the supernatural. It is only by the growth of science in modern times that we have been used to the notion that the laws of nature are rational. With us the arrest of natural laws is an arrest of reason, and therefore irrational. To those with whom everything is due to the will of God or gods nothing could be irrefragable for everything depended upon the will of a superior intelligence, power and being, and it was flexible to its pleasure, and if such pleasure could be secured by any rituals or rites a change of natural operations would be very rational thing. It is for this reason that the miraculous interventions which the ancients attributed to their gods were not to their eyes miracles in the modern acceptation of the term. Even now people who are used to the immutability of the natural laws in the domain of chemistry, physics or geology, are not so used to conceive of the immutability of the same law in the biological and in the social sphere. They are sometimes quite ready to expect a sociological transformation baffling the fundamental operations of the sociological laws. They would be prepared to believe that a particular organiser could effect a social change by his own genius. They failed to understand that the so-called social geniuses are but the functions of the laws of sociology.

But the view of Durkheim referred to, has no doubt its value. But it is to be modified to the extent that though to the primitive people the distinction between the natural and the supernatural could not be so marked that an arrest of the natural in favour of the supernatural could not be regarded as impossible and irrational as in our own days, yet they had some idea of an order of things. A study of the Vedic hymns discloses to us the sense of mystery that shrouded their composers every-

where. The Vedic people wondered that the high heavens could stand unsupported, that the red cow could give white milk. I cannot therefore, agree that the sense of mystery as a by-product of religious thought was absent in ancient times, though I am not prepared to include this qualification within the constitutional definition of religion. I have, therefore, purposely omitted the word God or gods, for there are great religions like Buddhism and Jainism, which do not believe in God or gods. In these, religious invocations, propitiations, sacrifices and prayers properly so-called have but a small place and for this reason an attempt to associate always the notion of religion with the systems of rituals and rites would be risky. Moreover it ought to be noted that rituals and rites are not necessarily connected with God or gods. Thus according to the Bible a woman should be isolated for a few days every month and the same law is to be obeyed at the time of child birth. It is forbidden to hitch a horse and an ass together or to wear certain kinds of garment. It is impossible to see how these interdictions could have affected the interests of Jehovah. The Vedic sacrifices offer another notable example. These sacrifices are full of complex rituals and rites but no propitiation of gods are intended, for the production of the fruit. They produce the effect by themselves spontaneously. Here we have positive rites and rituals without the idea of pleasing the gods. So are also the practice of *tapas* or austerities, which by themselves produce such a force that they themselves can produce the desired end or they can force any particular god to behave in a particular way even against his wishes. This idea is not absolutely restricted to the Vedas. Durkheim says that in the so-called feasts of the tabernacles, the Jews set up the air in motion by shaking willow branches in a certain rhythm and this caused the wind to rise and the rain to fall and it was believed that the desired phenomena would result automatically from the rite provided it were correctly performed. This is the explanation of the fundamental importance laid nearly by all cults upon the material portion of the ceremonies.

Durkheim defines religion in a very external manner as, "when a certain number of sacred things sustain relations of co-

ordination or subordination with each other in such a way as to form a system having a certain unity, but which is not comprised within any other system of the same sort, the totality of these beliefs and their corresponding rites constitutes a religion." Durkheim, however, is unable to define the nature of the sacred and cannot give us any characteristic that distinguishes the sacred from the profane. He runs also in a circular argument when he says that sacred is that which is preserved by the interdictions, while profane is that which is isolated from it. To him the sacred and the profane are in two different worlds between which there is no transit. Having thus an imperfect notion of the sacred, he thinks that each sacred entity is associated with a particular kind of belief and to each of the sacred entity, beliefs gravitate and they thus form into a system and such a system is called religion. Religion is thus a combination rather than a complex of loose beliefs and sacred entities which under the pressure of social environment group together. His study of religion must therefore necessarily be based upon a study of the integral nature of these beliefs and sacred entities. With him there is no unity in religions, for unity depends upon the correspondence of these beliefs and sacred entities.

Durkheim criticises the possibility of the origin of religion from animism, springing from the experience of dreams and dream personalities as being the double of the other self that lies asleep as held by Taylor and with some modifications by Spencer. The animistic theory holds that the idea of this double self that enjoys new experiences when the original self lies in the body on the bed, gives the notion of a distinct self. From that kindred self or living intelligence and probably also of a super self, Durkheim's argument is that in such a theory the origin of religion is to be found in hallucination of the dreams and as such all rituals, rites and beliefs based on hallucinations must be mere shadow and a mockery.

Again, Max Muller's naturism supposes that religion must begin with the senses or rather the sensuous things, as all other knowledge does. To this Durkheim's contention is that if religion begins with sensuous things such as visible fire, then it is impossible to explain how the various Vedic ceremonies could

be conceived as producing certain fruits merely by virtue of certain rituals and rites. To influence a visible thing one must operate in such a sensuous or physical manner by which those physical objects could be directly affected. Naturism repudiates the magical nature of the ceremonies which is actually the Vedic creed.

Durkheim disposes of the theories of animism and naturism on the ground that they do not provide for the exclusive classification of the sacred and the profane which to him appears as the fundamental characteristic of religion. In defining the origin of religion he turns to the idea of totemism or kinship between man and animals and vegetables which, as an anthropological idea, was introduced as early as 1792, based on the study of American primitive people. For about a century and a quarter the study of the primitive people of America and of Australia has brought many new facts about totemism into light. The Australians classify themselves into social groups, and in the hierarchy of this classification similarity of social customs and beliefs and mental attitudes depend upon similarity of the totems. The totemic view of these primitive people consists in the conception of a force which was supposed to show itself in a material form of a crow or a Kangaroo, or a lizard or a serpent, a particular tree or a piece of stone, which exerted physically for the well-being or the evil of the particular clan to which the totem belonged. The individual animal or vegetable totem would be born and dead, but the class remained and the impersonal force remained and acted through each member of the totemic clan. This impersonal force acted through each and every individual of the clan which had that particular totem; the sacredness of the totem was observed by the observance of interdictions against molesting them in any manner. Apart from this, the performance of the various totemic rites and ceremonies was guaranteed by the fact, that they were practised from the ancestral times and as such every member of the clan felt it his sacred duty to perform those rites and ceremonies and felt a sort of moral obligation with regard to them. But the Australians do not represent this impersonal force in any abstract form. The totem is only the material form under which the

imagination represents the immaterial substance or energy, diffused through all sorts of heterogeneous things, and this alone is the real object of the cult. What the native means when he says that "the men of the crow" is not that they are crows in the vulgar or empiric sense of the term, but that the same principle of the crow is found in all of them, which is their most essential characteristic, and which they have in common with the animals of the same name, and which is thought of under the external form of a crow. Thus the universal, as totemism conceives it, is filled and animated by a certain number of forces which the imagination represents in forms taken with only a few exceptions from the animal or vegetable kingdom. There are as many of them as there are clans in the tribe and each of them is also found in certain categories of things which forms the essence and the vital principle. These forces mechanically engender physical effects and an individual coming in contact with them without precaution, meets with an effect discharged spontaneously. Outside of men they play the role of a vital principle. Every member of a clan follows his totemic rites with a sense of imperative duty. For these sacred beings—those totems, he harbours great fear. Moreover, the totem is a source of the moral life of the clan. All the beings, who are under the same totemic principle, consider that owing to their common relation with the same totem they are morally bound to one another for definite duties of assistance, and vendetta which constitute the principal duties of their kinship. Thus the totemic principle acts as a totemic force which is also a moral power. This totemic force behaves like a god and when a totemic animal dies, each individual weeps for it, but the totemic god is not dead for he resides in the whole species. Among the Melanesian people there exists a belief in a force altogether distinct from physical force which acts in all ways for good and evil. It is an influence which is in a way supernatural which shows itself in physical force or in any kind of power and excellence that a man possesses. All Melanesian religions consist in getting this force (called Mana) for oneself, for one's own benefit. This force is not located anywhere, but it exists everywhere. The idea of a single and universal Mana could develop at the time

when the tribal religion evolved from out of the clans and with it there grew the feeling of tribal unity. Totemism thus is essentially a federative religion which cannot go beyond a certain degree of centralisation without ceasing to be itself, for, though the Australian societies show a common tribal cult, yet it can not supersede the individual principle of totemism. Durkheim maintains that the idea of an impersonal religious force enters into the meaning and spirit of Australian totemism, for it disengages itself, as soon as no contrary cult opposes it. Durkheim further maintains that the history of totemism applies to the genesis of religious thought in general. He says that the idea that in early times the divine was represented as definite and personal being is found to be false anthropologically, for the totemic cult does not refer to a concrete individual, but to a vague power spread through all totemic things, and it is this which dominates the entire religious system. The spirits, demons, genii and gods of every sort are only the concrete forms taken by this energy. Durkheim says that what we find at the origin and basis of religious thought, are not determined as distinct objects and beings possessing a sacred character of themselves. They are indefinite powers, anonymous forces, somehow reduced to unity, whose impersonality is like that of the physical force which science studies. Durkheim is strongly against the idea that religion proceeded out of fear or wonder or that it started with a belief in one or more mythical beings. The primitive mind does not regard his gods as foreigners or enemies, but they are rather friends, and natural protectors for him.

The soul in the totemic religions is both material and non-material. It is sometimes described as having the size of the body, at other times as a grain of sand, remaining in one part of the body it remains in other parts also. It is sometimes spoken of as escaping with the flow of blood. It is sometimes described as being so material as to be capable of being eaten up and sometimes as itself eating up other souls. After the departure from the body it plays almost the same kind of role when it was in the body, *i.e.*, it hunts, it sings, it goes about and so forth. It is generally of an invisible nature, though it may be visible by magicians by special kind of rites. The total number of souls

is always definite and there is no increase or decrease in it. After departure from the body they go to the land of the souls and reincarnate themselves when a new infant is born. The body is not merely a place of location for the soul, but it has such intimate relations with it that when the body is cut or pierced, it also is cut and pierced and it has particular affinities with particular parts of the body. The souls have the miraculous power of moving about in all kinds of places through earth, water or mountains. They have also a principle of unity and it may be said that it is one kind of soul that animates the bodies of the people of a particular clan, but in entering into each individual of the clan it differentiates itself in special forms and possesses special physiognomy in accordance with the physiognomy of the individual body. In this way it may be regarded to be of a fragmentary nature as it distributes itself among all the individuals of the clan. According to a particular myth widely distributed among the Australians the reserve souls in the land of souls as well as those which are animating the living bodies of the members of a particular clan, are derived from one impersonal soul containing the totemic principle within it. Both Spencer and Gillen agree that there is a mystic religious principle in each new-born child, which emanates from an ancestor of the Alcheringa. As the ancestral beings are but the fragments of the totemic principle and as they animate the individual beings, the totemic principles, the ancestral beings and the individual souls form the tripartite aspect of the one totemic principle. Apart from the soul, the Australians believed in another class of beings called the spirits, which resided by preference in a rock, a tree or a star, but could at will lead an independent existence in free space. They were regarded as beneficent beings with reference to the members of the surviving family of which it was a sort of ancestor. A spirit in this sense should be distinguished from a ghost which has only a limited power of action. The spirits were the souls of mythical personages whom popular imagination placed at the beginning of time. They are believed to have formerly animated bodies when they led a terrestrial life. They often guarded new-born children and accompanied them in their various undertakings.

One part of them enters the body of the woman and fertilises her and another part remains outside and works as the guardian angel. So we have the spirits who are different from wandering souls with no definite power and were associated with particular clans.

Apart from them, there is also the notion of a supreme God as creator. Some writers think that the conception of such gods was prior even to the totemic conception, while Durkheim interprets them as being within the totemic system. These gods, according to Durkheim, are the tribal gods, which are the ancestral spirits who finally won a pre-eminent place. The ancestral spirits are only entities forged in the image of the individual souls whose origin they are destined to explain. The souls exist however, only in the forms taken by the impersonal forces which were the basis of totemism, as they individualise themselves in the human body. It is through the idea of the soul that personality is introduced in the domain of religion. But it should not be held that the germ of religion was contained only in the idea of the soul. The idea of the soul presupposes the notion of Mana or the totemic principle of which it is only a special form. The spirits and gods could not be conceived before the soul, but they were more than human souls and had supernatural powers. The idea of the soul has merely served to direct the myrhological imagination in a new way to suggest the construc tion of a new type. But the matter for this conception has been taken not from the representation of the soul but from the reservoir of the anonymous and diffused forces which constitute the original foundation of religion. The creation of mythical personalities has only been another way of thinking of these essential forces. As for the notion of the great God, it is due entirely to the sentiment whose action we have already observed in the genesis of the most specifically totemic belief, i.e., the tribal sentiment. Totemism was not the work of isolated clans, but it was always elaborated in the body of a tribe which was to some degree conscious of its unity. It was for this reason that the different cults peculiar to each clan mutually touch and complete each other in such a way as to form a unified whole. It is this same sentiment of a tribal unity which is expressed in

the conception of a supreme God common to the tribe as a whole. These religious ideas are , however, inseparable from certain rites which are found in them and which in their turn left their influence. The cult depends upon the beliefs, but also reacts upon them. So far we may follow Durkheim; but it has already been shown that the original definition of religion by Durkheim is fallacious and involves an argument in a circle and is too narrow to include all religious beliefs and religions. The complex idea of totemism may be a primitive form of belief, but there is no ground whatsoever to suppose that other religions evolved out of this primitive concept. On the other hand, the religious ideas of totemism, though they may have partial similarities with other religious ideas, are neither so germinal nor so ubiquitous as to form the basis of evolution and development of other religions. They are elaborate and complex and reflect the genius of the social group which imply a common life with animals and plants. They however, show certain general characteristics of religion as they imply a system of beliefs and a system of action for the well-being of the individuals at least here on earth. Nothing has been shown by Durkheim which implies any course of action that would serve for the well-being of the other world as well. We do not know what were the courses of action that led to the superiority of the spirits or the great God. There is practically no moral ideas excepting the sentiment of clanish or tribal unity leading to mutual co-operation for self-defence and aggression. The idea of the immortality of the soul as well as the doctrine of reincarnation and transmigration, is also available. But there is nothing here to prove that the totemistic religion formed the basis of other advanced religions.

Another definition of religion supposed to be one of the recentest as given by W. Schmidt runs as follows: religion may be defined both subjectively and objectively. Subjectively it is the knowledge and consciousness of dependence on one or more transcendental personal powers, to which man stands in a reciprocal relation. Objectively it is the sum of outward actions in which it is expressed and made manifest, as prayers, sacrifices, sacraments, liturgy, ascetic practices and ethical prescriptions.

The writer makes considerable modifications of the term personal force in his explanations. He says, 'It is of course possible to feel oneself dependent upon impersonal powers but it is not possible to enter into reciprocal relations with them, since they cannot answer from their side, consequently it makes no difference whether it is a material force as for example, the vast and mighty universe or some inexhorable law thereof. Both are dumb and unresponsive to the human personality. Hence also primitive Buddhism inasmuch as it recognises no personal gods, cannot be considered as a religion but only as a philosophy. Later Buddhism indeed, and Buddhism everywhere that it has become a popular religion, has included in its wide-reaching system innumerable personal deities brought in by thousand backdoors.' The writer's ignorance of Buddhism both of the Hīnayāna and of the Mahāyāna is indeed deplorable. It is true that in degenerated Buddhism there are the personifications of many of the powers of Buddha as separate deities and Buddha himself is also adored. But in the Mahāyāna Buddhism also, in its elevated aspect, there is no personal God and Buddha is regarded only as a hero in a succession of heroes who were supposed to have been born even before Buddha. Moreover in the docetic schools of Buddhism the personality of Buddha is replaced by particular notions of which the Buddha stands as an emblem. The attempt of the writer to offer a definition of religion in which Buddhism, Jainism, Vedāntism and the forms of Sāṃkhya and Yoga religions where though God is admitted, no reciprocal relation is regarded as indispensable for religious purposes, fails to attain its purpose. The writer also fails in a very fundamental aspect in his definition of religion inasmuch as he does not include emotion as an indispensable characteristic of religion.

Leaving aside such partial definitions of religion and following our own line of thought, we find that the development of the study of the comparative method has brought a new crisis to religion. In this form of study which we have inherited from our scientific outlook of things wherein the thoughts, ideas, behaviour and conduct of men are placed on the same level, as our study of matter and its forces of environments and the development of life, challenges all supernaturalism of religion. Reli-

gion appears only as a human fact. It reduces religion to mere beliefs and emotions which are merely human characteristics. The existence of these beliefs and emotions does not point to the inexorable reality corresponding to those beliefs. In a long array we are taught to review the different religious beliefs, customs, practices, emotions, behaviour and conduct, rituals and rites beginning from the lives of the primitive people and the savages. Passing through the religions of the tertiary period of the religions of the Assyrians, the Babylonians, the Aegeans and the Egyptians and then passing through the religions of the Hindus, the Parsees, the Greeks, the Chinese, the Teutons and the Romans and through many other religions that sprang in the land of the Semites, and ultimately through Christianity and its developments through centuries, we come to the Islam which is often regarded as the last of the great religions. But the history of religions does not end with Islam and we have in India the succession of different forms of Vaiṣṇavism, Śaivism and the Sants. The Islam also underwent many developments in the course of centuries by coming in contact with the different heterogeneous cultures. A study of the data of the different religions placed on the same level for dispassionate study and comparision, relieves religion of all ideas of mysteriousness and shows them merely as a function of human culture. But while a similar study of sociology is backed by the concrete existence of different varieties of society from the primitive to the modern, the ideas of religion exist only in the forms of beliefs. But no proof is available that there is any objective truth or reality, substantiating even a partial accuracy of the ideological beliefs, the rituals and the rites, yet there was a time when the religious truths were believed to be more certain than even the beliefs which were founded on the testimony of our senses and inference.

The studies of the comparative method bring out a large amount of folklore, popular beliefs and practices which people show all over the world, and many theories and explanations have been put forward. It has also shown that the same sort of practices may be significant of entirely different motives and meanings in different races and religions and the very same ideas

and beliefs may be differently expressed. A belief or practice in one environment may express entirely different concepts and may be significant of entirely different emotions than its parallel elsewhere and a practice existent in an earlier time may be endowed with entirely different emotions and ideas at a later time.

In the comparative study of religion, however, as has already been said, the strictly biological principles cannot be followed. Even in very developed times certain customs may arise which may be easily regarded as a revival of old custom and superstition, but it may also be, that customs may be the outcome of natural spontaneity similar to that which was originally responsible to the rise of the customs in earlier times. Similar developments do not here always mean borrowing or copying. Thus if we compare the evolution of the Islamic religious literature from the middle of the 6th century A.D., we find that the development has followed almost the same lines as the development of the Hindu sacred literature, which might lead one to think that though there was a contact between the Hindus and the Moslems, from the 7th century, the two developments seem to be quite independent. Only in the case of the Sufis actual borrowing of tenets on either side may be suspected. Sometimes it is found that the same causes in the way of mental constitution and temperament gave rise to a particular belief or custom. It is also responsible for its continuance. In many cases it is also found that though in course of evolution certain particular forms of religious ceremony or beliefs had lost their importance or become obsolete, they are not entirely superseded and evolution means the existence side by side of older and newer forms, but not an absolute suppression or eradication of the older. Thus in the case of the Hindus the rise of Upaniṣadism did not mean the suppression of the older sacrificial forms of worship. Then again, the rise of Buddhism and Jainism meant only the continuance of these two forms of religious systems, side by side with Upaniṣadism. Then again, the rise of the cults of Viṣṇu and Śiva in their luxuriant growth into many schools and systems or the introduction of the various schools of the Vedānta religion did not mean the suppression of

the older forms of Vedic religion. In the folk religion, which is generally current among the common people we find an inrush of the Śaiva and the Vaiṣṇava cult and of the other divinities. It is difficult to say from what immemorial times, even this folk religions and the Vratas have continued. Thus for example I should refer to the folk religious practice followed by young unmarried girls for the benefit of their future mothers-in-law after death. A small pit is dug and on the side of the pit certain plants like paddy, banana, etc., are put and a kite is put in a particular corner in a flying posture and the ceremonial associated with it is often practised by young girls and the ceremony (Vrata) is called *puṇya pukur* or *Yama pukur*. It is curious to say that I discovered a terra-cotta copy which exactly tallied with the practice now followed, namely, the pit, the plants, the kite etc. in the excavations in Taxila which show that the same old practice continued in the early Christian era or before it. The dolls that are now made for this practice are exactly the same as I found in the Taxila copy and they again resembled very much the dolls that have been found in the Mohenjodaro excavation, representing mother divinity and other gods. Thus here we have an instance of a folk-religion continuing for at least 20 centuries and probably somewhat similar practice may be traced back to 50 centuries in the past. The same ceremonies for marriage, that are found in the Gṛhyas in 600 or 700 B.C., continue with slight modifications even now and so do also most of the other practices and ceremonies of the Hindus. Thus evolutionary development in religion does not necessarily mean the supersession of the older forms by the new ones. In the Hindu religion itself we find on the one hand the grossest fetishism, the worship of plants, animals and stones, side by side with the most advanced forms of pantheism and monotheism, and curious enough to say, that the two kinds of religion, fetishism and perfect monotheism or monism, may combine themselves in the same person. If strong and uncontested tradition is to be believed, Śaṅkara, the great advocate of Pantheism or Panentheism, himself worshipped the phallic symbols of Śiva and Gaurī. This brings out two most important facts namely, that religious beliefs of particular kinds have an

appeal to minds of particular temperament, culture and capacity. Regarding the distribution of religious beliefs in the Hindu community and the settlement as to which person should belong to which stage, in the graded hierarchy, from fetishism to the highest conception of the apperception of the unity of the individual and the divinity, the formula adopted is that of *adhikāra*. The word *adhikāra* means what belongs naturally to some one. A person is supposed to be competent to follow a religious belief that naturally belongs to his temperament and satisfies him and his capacities of thought, emotion, and conduct. Here also we find that the meaning of the law of evolution must be completely modified. There is no principle of the struggle of the survival of the fittest. Every religious belief is fittest as a function of a particular psyche. The apperception of the truth of religion in India is so subtle and elastic that no contradiction is found between the worship of a fetish or a phallic symbol or an image and the highest religious conception of monism or monotheism. A most wise monotheist like a Rāmānuja or a Chaitanya would easily fall in ecstasy with divine inspiration at a temple door. It is for this reason that the older and cruder forms of religion have always continued their existence in Hinduism side by side with the most advanced forms of religious thoughts that human mind is capable of grasping, and these reveal innumerable subtle differences; but they do not always indicate an artificial or mechanical borrowing or imposition, but a process of readjusting and reshaping.

Whenever beliefs and practices can be compared, a distinction can invariably be made between what it is that recurs and the form in which it recurs. A particular form of religion when transplanted among a new race, becomes modified by the genius of the people. Thus we find that Buddhism in Tibet assumed quite a new form and also transformed the Tibetan people in a new form. The older pre-Buddhistic religion of Tibet, which was essentially a shamanism, devil-charming, devil-dancing and necromancy was indeed actively suppressed and its establishments were destroyed by the Tibetan ruler on his conversion to Buddhism in the 7th century A.D. But this faith which was natural to the Tibetan genius, inspired Buddhism

and created many demon-like gods and goddesses out of the godless Buddhism and created also many ceremonies and rites of their worship. The physical environment of their life in their rigorous climate where they see nature in her roughest mood in a pitiless fury of storms and cold, terrorising the brave as well as the timid, impelled them to worship the more obvious forces of nature as malignant demons, which seem to wreck their fields and flocks, and trouble them with disease and disaster. Their inveterate craving for material protection against those malignant gods and demons had forced them to pin their faith on the efficacy of charms and amulets, which as cherished objects are seen dangling from the dress of every man and woman, not even excepting the lamas themselves. The charms are borrowed from Sanskrit texts of mystical Buddhism and they are supplemented by many rites. The natural scarcity of food which generally consisted of meat, withdrew the restriction of animal injury which is one of the fundamental creeds of Buddhism. It also introduced many practices which consisted in the free use of meat and wine and also sex-connection, as articles of religion which would have appeared extremely shocking to original Buddhism. The natural vulgarities of uncivilized peoples also crept into their religion and transformed Buddhism into horrid rites and rituals, most repugnant and shocking to the religious sense of the civilized and cultured. Magic of various forms grew in a religion which had from the very beginning discarded all magic. So also we find, though in a much milder manner, that different tones were supplied to Christianity in the earlier stages of its development by the Greeks, Romans, Syrians and Alexandrians. Islam also developed many new thoughts with the conversion of Persia by the genius of the Persian people.

Again the presence of survivals, superstition and other signs of cultural differences in an environment shows that as a general principle any apparently rudimentary or irrational datum need not, on that account alone, be older than one more advanced or elevated. A culture can decay and be followed by one of a lower, ruder and of less organised type. This is no doubt true that there has been a great advance in human cul-

ture from the first appearance of man onwards, but the persistence of all that is styled irrational or superstitious and the frequent cases of decay and retrogressions and new growths greatly restrict the application of the general principle of evolution to religion, though it may hold good in most other spheres of naturalistic phenomena. It must be borne in mind that man, however civilised he may be, has within himself, the savage and the primitive in a dormant or a semiconscious condition and religion being fundamentally a human fact, some unconscious psychology must play here an important part. The ante-natal stages have a profound significance for the development of man's psychical nature. These stages and the dependence of the infant upon the mature experience of parents and environment are as fundamental for his psychical life as the more complex and obscure factor of heredity or the influence of human ancestors hundreds of thousands of years ago. The actual history of ancient civilisations reveals the fact that religion has seldom an inherent momentum of its own. It affects individuals more than the society as a whole. Hence whatever may be proved to be due to heredity and prehistoric evolution, more attention should be paid to the traces of the ante-natal states with all their suggestiveness for lower psychical nature which the individual cannot entirely overgrow. The comparative method of comparing the data of religion is not by itself sufficient guarantee for the application of the evolutionary principles. There is always in religion something deep-seated within our psychology which can seldom be fully known to us, which determines our religious conviction, which explains the propensity, even in a scientific man to believe in the power of the unseen which shows itself in a refined form in the doctrine of grace and in an unrefined form, in the efficacy of magic, astrological influences and the sanctity of ceremonials and rites.

The study of the comparative data of religions has not been made in the same manner by the different students of the subject. Thus, while the anthropological school, such as that represented by Frazer, has remained satisfied to compare the facts of the religious consciousness both in its subjective and its objective aspects from the large variety of people widely different in race,

culture, space and time, the sociological school have taken social units in hordes, clans and tribes and under particular geographical, economical and political environment and have attempted to study the facts independently by themselves, as Durkheim has done with reference to the various Australian clans and tribes. Though important facts may be elicited about the fundamental religious attitudes, ideas and beliefs of a particular people and this, so far, as they are human facts would be comparable to the religious attitudes and beliefs of other social groups, yet it should be borne in mind that the development of any social group can never take place by itself without reference to other social groups, in the environment from which it grows. Moreover, the religious phenomenon of any social group is an emergent fact of its psychological, sociological and environmental data. And it is not therefore, possible to trace the origin of religious phenomena appearing in other social groups to it, merely by the priority of appearance.

Our attempt in this chapter has been to show that the development of science and the development of the study of comparative religion has been a menace to our sense of mystery, holiness and truth of religion. But it has also been attempted here to show that the study of the development of religion cannot be made in the same manner as the study of biology. Evolution as the gradual process from the more and more homogeneous to the more and more heterogeneous, from the less definite to the more definite, from the less concrete to the more concrete, from the less co-ordinate to the more co-ordinate, cannot apply to the development of religion. The religious phenomena are emergent psychic facts based upon the entire psychological history found in man and his animal ancestors, and also the sociological facts which are in themselves the functions of a psychological sense of unity and the environmental necessity. The inner psychology of man, where the savage and the civilised live together, is one of the most important facts to be noted by every student of religious phenomena. Thus Tennyson also rings the same note in "The Dawn":

> When shall we lay
> The ghost of the Brute that is walking

And haunting us yet, and be free?

That the Brute is there dressed in the most gorgeous clothes wearing the most gorgeous crown of sparkling diamonds, emeralds and rubies, enthroned upon chariots that move four hundred miles an hour dropping the most devastating shells of fire and working the most demoniacal orgies of crushing manslaughter, ruining temples and tombs, houses and palaces alike, burning the very shreds of civilization, yet affecting to be polite and charitable, hospitable and kind, civilized and cultured, glorified in racial pride, calling himself Christian, yet enthralling the feebler peoples by multitudes with the heavy iron chains, the most fearful and hideous, can never be denied by anybody. The full strength of this demon, the savage and the brute in us can never yet be discovered and here lies the mystery of religion. Our purpose is to find out in the end, what should be our religion in the days to come, if we are to stamp out and destroy this demon in us.

The fore-going discussions are intended to demonstrate the fact that our religious consciousness as applied in the ordinary accepted sense as covering the consciousness of the primitive people as well as that of the most advanced geniuses, cannot be regarded as gradually unfolding in time in accordance with strict laws of evolution. Our religious consciousness is a psychological fact and therefore, it must depend upon the individual psychological datum. The savage and the primitive have a certain type of psychological datum which is largely in conformity with their tradition, social environment and condition of life. But even in advanced societies there may be many whose mental make-up is not very much unlike the mind of the primitive man. Such persons may profess to follow an advanced religion, but they would inevitably draw the force of their religious life from the sort of stimuli that appeal to the primitive men, though the primitive symbol may change its form and value. In developed minds other higher forms of religious urge, which are consonant with the growth of knowledge and more developed social sense, show themselves in their thought, emotion and activity. Though religion may in some sense be regarded as functions of social development, yet in a far truer sense it is a function of the deve-

lopment of the higher sensibilities of a psychic life which may reflect themselves in co-ordinating our thoughts, emotions and social activities.

In our survey above we have noticed that many higher religions had changed their nature when introduced among people who are in a backward social and intellectual conditions. So when many dogmas and rites which persisted from early times and were accepted by men in higher social developments, the re-actions were of an opposite nature. The symbols of a primitive time, though remaining same in form, changed their value in almost an un-recognisable manner. The higher growth of religious consciousness cannot be regarded merely as a result of a higher social development. The social development no doubt plays its part in the changing conditions of life and environment and economic and social intercourse, as also in the increase of knowledge of natural phenomena and our control over them. But the dawning of a higher religious consciousness is a separate emergent fact. The result is that even in the same society we find men having a fundamentally different type of religious consciousness and religious capacity. Though social evolution may in some measure affect the religious sensibilities of a man, yet the religiosity of a man is largely due to his capacity for living a higher life and enjoying higher emotions as well as to his capacity of co-ordinating his acts in accordance with them. Religious evolution therefore, is entirely different from biological evolution and even from social evolution. It implies no doubt a background of social evolution of a particular standard, but it is largely the effect of one's own religious sensibilities and the manner in which all his operations may be guided by them. In the development of religiosity we are not so much concerned with what nature or society make of us, but of what we ourselves make of us through our religious urge.

CHAPTER III

INTELLECTUALISM AND RELIGION

From the second half of the eighteenth century scientific interests were pre-occupied with the study of the religion of the savages. Brosses wrote his work on Fetishism and declared that all religions, except that of the Hebrews, had sprung from fear and star-worship. Towards the last part of this century we have a succession of philosophers, such as Lessing, Kant, Fichte, Herder, Jacobi, Schleiermacher, Fries and Hegel. Lessing and Herder had taught that man had risen to higher and higher levels but he was always under the influence of a personal and extra-mundane God. Before this too, almost every philosopher since Descartes had to say something about God. Thus Descartes, after having doubted everything came to the conclusion that if he doubted all things, doubt at least existed, and since doubt was a mode of thought, thought also existed, and therefore did the thinker, *cogito ergo sum,* also, since in thought we have an idea of perfection, such a perfect being also existed and this perfect being was God. This is called the ontological argument of Descartes, namely, from thought to being. He then thought that since God was perfect, perfection implies that he has no deficiency and, therefore, He was omniscient, omnipotent and good; consequently it could not be His intention to delude us with false impressions and, therefore, our impressions of things corresponded with their reality. Descartes had separated the mental from the physical processes and was therefore, unable to explain why our limbs moved in accordance with our wishes. This difficulty was solved by Geulincx by his theory of occasionalism in which he attributed all movements, both mental and physical, directly to God. He held that God alone makes the world visible to the mind and we are merely spectators, and on the occasion of the movement of my body He creates a thought in my mind to that effect. God is the one and only moving cause in the universe.

Malebranche regarded God as the mirror in which we beheld the outer world. All our ideas were derived from Him, Who contained all thoughts and things within Himself, the only cause of all that happens, the only source of all beings both physical and spiritual. But He is neither physical nor spiritual. He is the highest and only true good and therefore, even when seeking the material and temporal benefit, man is always seeking God, for everything is God.

In the middle of the 17th century we have Spinoza, the Pantheist. Some have regarded him as the arch-enemy of religion and others as the prophet of the higher cult. He denied the personality of God as also the idea of a divine revelation through God-man. With him God was the only substance, and of His infinite attributes only thought and extention could be known by us. Spinoza characterised this substance as infinite, indivisible, unique force, eternal, cause of itself and of all things. By cause of itself, Spinoza meant it to be something of which the essence involves existence, the nature of which is conceivable only as being in existence. The self-existent is the starting point of our thought. The Universe was a mere deduction from it. There is no conception here of cause and effect in the sense of invariable antecedent, but only as ground and consequent, as in the case of the deduction of Euclid's proposition from the self-evident axioms. According to him all things are connected parts of each other, and are linked up by an inner bond of causality and so are the minds of all men. Individuality is a mere semblance and an one-sided way of looking at it. If we isolate man we destroy his character as an intelligent being. No man is alone by himself. Our lives are connected with one another and our individuality is only a fragmentary perspective. From the stand-point of pure reason we are lost in an all-embracing unity in which the parts discharge their separate functions. Our knowledge is true only so far as it is determined by the idea of the whole. His philosophy starts with God and returns to it. God is beyond doubt and demonstration. God is devoid of all limits and all qualifications. No ideas of number, degree, time etc. can apply to God and so also all conception of good and evil, of human freedom and responsibility must dis-

appear. God can only be defined in negative terms. But this unity differentiates itself into infinite attributes and finite and infinite modes. The attributes of God are but the necessary categories under which our mind represents God. They do not constitute the essence of the substance in itself and though the attributes appear as different they are all involved in the unity of God. Each expresses the whole reality of the substance like the different ways of the reflection of the same light, or the two names of the same person. The finite things have no independent being, they are but the ever-varying shapes or modes by which God expresses Himself. Every thought, wish, feeling is a mode of God's attribute of thought, and every visible thing is a mode of His existence. Spinoza admits three kinds of knowledge, sense-perception, reason and intuition. The last one gives us a direct knowledge of the essence of things and ultimately of the divine essence. Reason also, ultimately, is a part of the infinite mind of God. By intuition we know the results of reason by a flash of lightening as it were. Man's blessedness lies in the intellectual love of God. The highest virtue is to know God and to view all things from their centre in God and to be moved only by the passion for the good. The true end of life is release from the bondage of the senses and the realisation of God. This self-realisation must take place under the control of reason identified with the love of God and the love of man. We are free only in so far as we partake of the nature of God. Knowledge resolves passions and makes it easy for us to realise the idea of God. The attainment of greater perfection and freedom from passion is joy, whereas our fall into lower stages is pain. The human mind cannot be destroyed with the body for it is in reality eternal. Locke, an English philosopher at the end of the 17th century and the beginning of the 18th, started with empirical consideration of things. According to Locke it is possible to know God because our mind contains the images and archetypes of God and of the soul. God's existence is assured for us by the design in the outer world and by our own existence and our powers, which demand a most powerful and intelligent being as their creator. But the true knowledge of God can only be had from revelation and faith.

From Locke we pass to Berkeley, the great idealistic thinker of the 18th century, a contemporary of Addison, Pope and others, who denied the existence of material things and held that all perceptions are of the nature of thought. The existence of all unthinking things is their perceptibility—*esse est percipi*. The ideas that exist in God are impressed upon our senses by Him and all material things as such are false. All we know is our own sensation and there is nothing beyond them. The table I write upon exists only so long as it is the object of some one's perception. Berkeley denied the existence of abstract ideas. He accepted the reality only of spiritual beings. God is a willing and thinking being and He impresses upon us all our sense knowledge. The orderliness of our sensation is a proof of the supreme intelligence and power of God, for He is controlling the minds of all and is supplying them simultaneously with knowledge. The connected whole of the God-impressed ideas is called nature. The ideas that God imprints upon us are the archetypes of His own eternal ideas. We can never know God as He is, but only such as He allows us to know.

Newton, the great physicist, was born in 1642. He limited himself generally in researches in physics and mathematics, but he was a man of deep and reverent piety and saw in the wonderful order and arrangement of the universe the most conclusive proof of an intelligent creator. He derived his theory of knowledge from Locke, and thought that God contained all things in Himself and was the ultimate source of all beings. It is impossible for us to exaggerate the influence that Newton's Principia exerted on the thoughts of his contemporary people. It is the same as Darwin's theory of evolution exerted in later times. A number of atheistic thinkers sprang up, of whom Holbach was the chief exponent, and on the other side, there came a number of theists or deists.

The notion of 'Deism' was not clarified at the time of the theological controversy that took place in the 18th century. We cannot call all the thinkers of the time as deists. But the philosophical position of deism, as clarified later on, consists in the idea that God like a Demiurge, constructed the world and gave it its laws as He did in the field of our morals. As a perfect and

omnipotent creator it is not necessary for Him to interfere with the operations of His own laws. His interference is not ruled out, but it is not necessary to interfere with the operations of the world because there are no defects in it.

John Calvin, a French man, of the 16th century had made a great impression in the religious world by the manner of his exposition and modification of the doctrines which are as old as Augustine. He believed in the doctrine of the continual creation and superintendence and overlordship of God as well as in the spontaneous freedom of man in making his selection. He also believed in the doctrine of predestination in a somewhat different manner from that which can be found in Augustine. Though man was free to choose in a given situation, the situation itself was a creation of God. It is by creating and controlling the situation that He allowed sin to break down for the fulfilment of His purpose. Since the time of Adam's fall, Adam's descendants have been constitutionally possessed of evil tendencies in varying degrees. It was the providence of God that helps man to release himself from an unhappy situation, by providing greater power of resistence to evil by the internal regeneration of the individual. While Augustine's predestination was limited to the final provision of salvation, Calvins's theory of pre-destination provided for the continual regeneration of man in accordance with his deserts.

The English movement of Deism was an attempt to free religion from the mysteries of Church dogma by founding it on more rational grounds. The thinkers of the 17th and early 18th century in England sought to establish the natural legends upon the basis of reason without any reference to supernatural revelation. It was a product of the new scientific outlook generated with the Newtonian discovery and that of Copernicus. Lord Herbert of Cherbury (1583-1648) believed in the existence of God, the duty of worship and the obligatoriness of virtue and piety, and the need of repentance, and the fact of punishment or reward here and hereafter. He regarded all religious doctrines as priestly impositions, and God as a postulate of reason and not given by revelation. John Toland (1670-1721) was the first to hold that everything mysterious in religion should be rejected.

He also rejected authority from religion and turned to primitive Christianity for his inspiration. Anthony Collins (1676-1729) maintained the freedom of thought as against the clergyman who had tried to enslave it. He was, however, a determinist and was criticised by Clarke who held that there was in man a principle of voluntary self-determination. Clarke maintained that there may be a previous certainty even of free acts which God may know by his foreknowledge, but that did not deter man from exerting his free-choice. Tindal (1730) also tried to prove the efficiency of natural religion and to show that Christianity, so far as it is true, supported it. He further holds that since God is perfect, He must have given man the means of knowing Him perfectly and serving Him perfectly, and He must have, therefore, communicated to man His religion from the very beginning. Religion, therefore, is discoverable by reason.

The one fault of these deistic writers was that they lacked religious feeling. They regarded God as standing outside the world and giving to man an initial knowledge, once and for all. They regarded God as an easy and tolerant person who cannot be offended easily. There is, therefore, no necessity of coming to any reconciliation with Him. Miracles are impossible and the work of Christ superfluous. There is no need for any revelation. The world was a vast machine governed by the law of gravitation, set in motion by God and guaranteed to continue in a perfect condition without any interference from God for all times. The deistic tendency was terminated by the scepticism of Hume and its refutation by Conybeare (1732) and Joseph Butler. Butler himself was a great exponent of the validity of reason, but he thought that reverence and humility are absolutely necessary for the realisation of the nature of God and our relation to Him. In his "Analogy of Religion" he tried to show that the Christian religion has natural religion as its basis. The instructions of Christ supplement the laws of reason. But Butler's greatness was in his doctrine of morals and his insistence on the validity of conscience.

On the continent, the great writers who had ushered in the French Revolution, Voltaire and the Encyclopedists, Montesquieu, Condillac, Helvetius, Diderot, LaMettrie, d'Alembert,

Turgot, Holbach were vehemently claiming for liberty of thought and freedom from ecclesiastical and social restraint. They insisted upon employing scientific knowledge every where, and wrote vehemently against the abuses of the church and the intolerance of the Jesuit priests. Thus the influence of the scientific development passed through the milder form of Deism into Atheism, Empiricism, Materialism and Naturalism. We have also here to note the positivism of Auguste Comte in the beginning of the 18th century. Comte introduced a system of thought and life which he wanted to be based on the definite and certain results arrived at by scientific methods. Comte was anti-metaphysical and his philosophy was based on a study of sociology. He was greatly under the influence of the sociological thinker, Saint-Simon. He held that from the nature of human intellect each branch of knowledge in its development had to pass through three stages, the theological or the fictitious, the metaphysical or abstract and the scientific or the positive. In the first stage we interpret the unknown by the known and attribute the phenomena of the world without, to the actions of beings moved by human passions, and in the third, we content ourselves with discovering the law and order of the universe. Noting the relation of co-existence or succession, between these two stages there is a transitional stage in which verbal entities take the place of divine will. Pestilence in former times was regarded as being due to the wrath of an angry God, but in the positive stage we know that it is created by microbes which can be prevented. Comte is regarded as the founder of Sociology. In his social statistics and dynamics he made the first attempt to study society in its two-fold aspects. He held humanity to be made up of families and nations and the religion being that which is capable of uniting all, and having 'live for others' as its guiding principle. The great mass of men and women must be served through service, to family and country, to kinsmen, friends and fellow countrymen. Humanity is strengthened not by reducing all nations to one level, but by the free development of each nation bringing to the common service of mankind the special aptitudes and the sources of each nation in their fullest development. Devotion to humanity is based upon family affection and love of country.

Humanity does not wipe away nationality, but only controls it. Making a nation glorious consists in service and not in domination. The earlier religions are not bad and false, but are only approximations to truth as were possible in earlier ages. Their acceptance and continued existence show that they answered to the demands of certain human minds, and as such they fulfil a necessary function. The positivists thus hold in esteem the old religious teachers as well as their critics like Diderot, Condorcet who tried to usher in a new way of thought. Altruism, according to Comte, is inconsistent with purposeful self-denial. Pleasure is not an evil except when it involves neglect of duty and pain to others. It is by only having unshaken physical health and cheerfulness of temper that we can help others. Comte thought that it is useless to speculate about the absolute which is out of reach of our relative powers. We can only practice benevolence to our immediate neighbours and follow the laws that control our destiny for the betterment of humanity. In positivism all knowledge is viewed in its relation to man and human knowledge, and is regarded as adequate for all human needs. The philosophy of positivism was followed from an independent stand point in England by John Stuart Mill, Lewes and Harriet Martineau and many others. Even now there is a positivist society in Paris. In India it had affected the thoughts of the great novelist like Bankim Chandra Chatterjee and many others of his age.

In the 17th century, rationalism was slowly approaching and producing a refinement of religion. Thus Bossuet (1627 to 1704), though a firm believer in the Christian faith, regarded understanding as the light which God has given us for our guidance, for saving and delivering us from sin and error and guiding us to truth. Reason when not seduced by passion was infallible.

French materialism attained its highest expression in Robinet (1735-1820) in his De La Nature and Baron d'Holbach's Systeme De La Nature. Robinet used to say that to the question who is God, our only answer is we do not know. Our only possible knowledge is the knowledge of Nature, in which all things have their origin and being. Holbach tried to propound that nothing exists but matter. He tried to combine in himself the

materialism of La Mettrie, the sensationalism of Condillac, and the self-interest of Helvetius. To him the universe disclosed nothing but a combination of matter and movement, an unbroken chain of causes and effects. The totality of things is the greatest of all, which we call nature. There is no purpose or order in nature, –but only necessity. Soul is only a part of the body and consists in the molecular motions of the brain. Nothing in nature points to the existence of God. Man is a tool in the hands of nature. Morality is founded on self-interest. He preached against everything religious and moral. The notion of God is the source of falsehood and hypocrisy. Nature frees man and religion enslaves him. Thus French enlightenment ended in scepticism and negation. The individual was the measure of truth and the right study of science was regarded as panacea for all evils. But Rousseau was the only figure of the time who, while he shared the love of freedom with all his predecessors and contemporaries and was a scientist himself, was quick enough to understand that the nature was not without something behind it. He held that the existence of God or the immortality of soul cannot be proved; we have an inner feeling with regard to the existence of them both, which is infallible. Thus he said, 'The more I strive to prove the infinite being of God the less do I understand it, but I feel that He is, that is enough for me. The less I comprehend, the more devoutly do I pray. God requires no other service from men than the devotion of heart. Reason is incompetent to decide the truth of revelation. The simplicity of scriptures prove them to be revealed'.

We can now consider German enlightenment, beginning from Leibnitz. Leibnitz thought that the universe was made up of individual selves which he called monads, and the corresponding order between the monads was attained by pre-established harmony. The monads can neither be produced nor destroyed except by God. But though each monad is self-contained, it can reflect in itself all the other monads. The totality of the monads constitute the city of God. God is the highest of all monads. Leibnitz also tried to demonstrate that God fulfils His own purpose in His creation and that permitted evil to stay because that also serves a purpose. He regarded this world as the best

possible of all worlds. For, God being perfect His handicraft must also be perfect. Kant, whose reputation as a philosopher is not lower than anyone else's, is more known for his Critique of Pure Reason and theory of morals. He regarded God as at once the final cause and the ultimate ground of all beings. Our notion of God can only come out of our notion of what is good, that is, question of ethics leads us upto the question of religion. According to him all religions are based on the freedom of the will and the essence of all religions is morality. There is no place for love. Nor should we be actuated by fear and hope. The son of God with Kant is simply humanity and it is only by our acceptance of this idea and by our endeavour to become incorporated in it, that we become the sons of God. This is the perfect ideal and we should pin our faith in it and not in the historic Christ. Church means for him, the society of men for mutual help and the practice of virtue. The kingdom of God lies in the moral order and the moral commonwealth. The doctrine of trinity has no significance for him. It does not matter if there are three or ten persons in the god-head. The history of the church was a continuous conflict between superstition and reason. The supremacy of ritual over reason leads to priest-craft and idolatry. He tried also to harmonise his own idea of morality with Christianity.

The most important person dealing with religion among the philosophers was Hegel, whose views have influenced the views of many other people.

The essence of the philosophy of Hegel is that thought and being are identical, i.e., there is no being outside thought or that all reality is comprised in being. Thought involves an element of motion in it, which develops thought from its most contentless and simplest and most ubiquitious and primary stage as being or non-being to develop gradually into concepts which are the richest and most complex. The law of this development is that every stage of thought from the simplest to the most complex involves within it its contradiction and its opposite, and whenever any particular notion is affirmed or posited, the contradiction that is inherent or involved in it, is reflected out of itself, and stands against it. This opposition is the second stage of thought,

but this is overcome by its inherent dynamism. Overcome this opposition and a new synthesis is established. This synthesis again has its contradiction of another order which opposes it, and the opposition is overcome by a new synthesis. Hegel thus showed in his logic that the most primary and contentless stage of thought is pure being, but being involves within it, its opposite, the pure non-being, which is equally barren and contentless. This opposition between being and non-being is synthesised in the notion of the becoming. Hegel then showed that all the categories of thought can be deduced by a synthetic process starting from the most elementary state of the being. Since there is nothing in the world which is not thought, every phenomenon in the world followed this law of thought that is thesis, antithesis and synthesis. History, philosophy, art, religion are all phenomena of thought, and therefore they all followed a course of development in accordance with the law of thought or the dialectic of thought. Hegel tried to take up each of these, namely, history, philosophy, art, religion, psychology, etc., and tried to show that each of these has followed this law in its actual development and history. In his philosophy of history he tried to show that history has followed a course of ever-growing complexity of synthesis starting from the most simple. In his history of philosophy he has shown the same with reference to the development of philosophy. Thought itself is a tripartite division, first the subjective thought, which implies and involves its opposite, the objective thought, and the absolute thought, a higher synthesis, in which this opposition is resolved. The defect of subjective spirit was that it was merely inward; objective spirit on the other hand was merely outward. They are two opposite extremes. In the absolute spirit the gulf between the subject and the object is annihilated and both are embraced in a unity. The stage of absolute spirit is reached only when the mind realises that whatever may be its object, it is its own reality. It is art, religion and philosophy which are the phases of absolute spirit. In art, the mind represents the universal or the absolute through sensuous images and things. But since the representation of the absolute, i.e., the reality which embraces the subject and the object through sensuous things, is only an imperfect way of representation, the

absolute spirit has to ascend a still higher stage in religion in order to arrive at its final stage in philosophy in which alone the absolute can be self-conscious. In symbolic art the human mind struggles to express its spiritual ideas, but is unable to find an adequate embodiment. The symbol of a lion suggests strength, but does not express it. A symbol is, therefore, always ambiguous. A triangle may suggest a trinity or a delta. The romantic type of art is that in which the suggestion is greater than the matter of its expression. In art the absolute thought appears in the form of a sense—object, but in religion it is partly sensuous and partly rational. Thus in religion the idea of the Absolute thought is called God. The evolution of the idea in its manifold manifestation of forms is expressed by the sensuous picture of creation as taking place in time and place. Thus the philosophic fact that the idea is continually expanding itself, is expressed by the sensuous story that God created the world. The idea, that the Universal produces the particular is represented as God the Father and the Son. The idea of the God-man stands for the unity of God and man. The popular idea of God as a person stands for the truth that the Absolute is not cause or mechanism, but a personality which is self-conscious. Hegel regarded Christianity as the only true religion, because its dogmas such as Father and Son, Creation, Heaven and Fall have an inner meaning and thought content which is identical with the principles of true philosophy, i.e. Hegel's philosophy. In every religion there are three moments, namely, that of Universality as a God, that of particularity as human minds standing opposed to God and the third moment of individuality consisting of the return of the particular into his universal through worship—the attempt of the human mind to annihilate its separation and alienation from God in its efforts to unite itself with Him and to become identical with Him. Unity of God and man is, therefore, the fundamental principle of all religions. Hegel here strongly repudiates the idea that his philosophy is pantheism. He says that pantheism asserts that every individual object, this stone, this tree, this man, is God, in all their immediacy and particularity, but Hegel's philosophy opposes it. The individual in its immediacy and particularity is not God. It is only by renouncing and

giving up its particularity that anything can enter into union with God. In the sphere of morality the particular has to forego its particularity as personal ends and develop the universal mind, within itself. The Universal mind is none other than the mind of God, who is my inner core or essence.

The three phases of religion are the religion of nature, the religion of spiritual individuality and the absolute religion, i.e., Christianity. Whenever God or the Absolute is conceived of as something less than spirit, substance or power, in all such cases God is not regarded as the ruler, creater and master of Nature,—it is called natural religion. Natural religion first manifests itself as magic. The object of religion is to bridge the gulf between God and man. In magic a particular faces another particular. It is felt that I, an individual or particular, have power over this illness, this drought and so on. There is no passage here from the individual to the universal. When the universal first makes its appearance, we have the beginnings of religion. In the religion, in which the universal appears as pure being or the absolute being and everything else is dependent upon it, arises out of it, and disappears into it, we have the religion of substance, and Hegel regards the Chinese religion, Hinduism and Buddhism as instances of it. The political institutions of a people always correspond to the religious conception. Only with an exalted and spiritual conception of God, can there be good laws and good government. People who have the sense of religious freedom and are free in their inner consciousness and know God as free, deserve free government. The advancement of religion means the ever increasing spirituality of the idea of God. Only in Christianity God appears as a concrete spirit. In many of the religions, following the second stage of development, such as Zoroastrianism, the Syrian and Egyptian religion, God is not conceived as substance but as spirit. But the idea of spirituality does not yet make its appearance. Spirit is the universal and substance also is universal, but substance is an abstract universal or barren because it is destitute of any determination. Spirit, on the other hand, is the concrete universal which sunders itself into its opposite, the particular, and then overcomes the gulf and cleavage by conscious unity. In Zoroastrianism God is not wholly undetermined as the

Brahman of the Hindus, but God is the good, the good is the absolute power of Ahura Muzda. But this good is completely abstract, because it does not produce its opposite, the evil, out of itself but there is a separate principle for the evil. Though Ahura Mazda and Arhiman are personal beings, they are not genuinely spiritual.

Passing to the transitional religions we come to Christianity, which according to Hegel is absolute religion, the religion in which God completely and finally reveals Himself as a concrete spirit, the doctrine of the Trinity, the creation, the fall, the incarnation, the redemption, the resurrection and the ascension.

Miracles are something which the senses perceive to have happened and they are no test of the truth of religion. Only spirituality is the test of religion. The Christian conception of God is a threefold notion, as universal, He is God, the Father, as begetting the particular man out of Himself, He is the Son and as the return of man to God, He is the Holy Ghost. These three are the three moments of the self unfolding idea, the three in one. The Son and the Holy Ghost are not different from the Father, nor are they parts of Him, but they are the entire god-head. The production of the son is a rational necessity of the idea, and it is in the very nature of God to create a world, and also, that it should be estranged from Him and attain a position of importance, and thereby create sin and finally annul the estrangement by the crucifixion of the sin and pass over into his concrete unity. The estrangement of the man and the world represent the fall which is the idea of all sin and evil. Man's individuality by itself as opposing God is evil. In the person of Christ the popular consciousness finds the unity of God and man placed before it as an absolutely immediate sensuous fact.

According to Lotze we are compelled to assume an absolute all-comprehending unity in which all things are rooted and have their being, but by the analogy of experience we must infer that only a spiritual being, a soul, has the property of containing a unity throughout all change of variety and manifestation. It has to be assumed, therefore, that all things whose unity we have to accept must necessarily be spirits or souls, and this we can discover from the facts of our inner life. Thus all the souls of the

universe are united into a community of individuals which are in communion and in relation with one another through their relation with the supreme substance, in which they are all united.

By an analysis of concept, Lotze arrives at the idea of one self-maintaining emanant activity which is at once one and many. Lotze says we must therefore, regard this notion of the absolute as a limiting conception which postulates an ultimate fact in order to understand the world, but which cannot possibly be deduced from or explained by its own consequence. All individuals stand in relation of dependence and subordination to God or the Absolute but they know nothing of the manner in which they came into such a relation. Many systems of philosophy admit one absolute principle. Thus the materialists hold matter to be the last ultimate principle and yet ascribe to it the task of remaining unchanged through all changes. But such a task can only be accomplished by spirit and such a spirit cannot be unconscious, the unconscious cannot generate the conscious. The idealist philosophy calls attention to the fact that our whole belief in the presence of an external world of matter reposes merely upon our feelings, intuitions and ideas. This material world is no more than a belief with which we try to supplement our experiences in order to understand their cohesion among themselves. The properties of matter being only a part of our experiences their integration can be achieved in thought, as Kant has taught us that space is only a mental appearance engendered by agencies which are not spatial. Lotze predicates self-distinguishing personality to this spirit. The self-distinction arises between the self and its own inner constituents sparkling out of the movement of the ultimate self-developing thought—God. The personality of God cannot arise in the same manner as it arises in us by distinguishing ourselves from the non-self, for God has nothing outside of Himself. So the distinction that arises in Him is between Himself as a whole and the moments that pass in His inner self-development. There seems to be something like a destiny that determines the self-developing activity of God manifesting itself as the given world. But this destiny cannot be a law *ab extra*. This is only a form which we ascribe to His own spontaneous activity. There must have been many ways

in which God could have determined Himself, and it is by His own choice and will that He determined Himself in this particular way. Like Barkeley, Lotze applies the doctrine of *esse est percipi* to all unthinking things. It is only the selves that are the real creations. Everything else is but the perception of these selves.

The principle of the good and the holy and of worth cannot be deduced merely from the idea of an all-engulfing existence. It is a character of another dimension. To us, who have to pass through struggles, good appears to be an obligatory ideal, but for God, who is always holy and whose nature is goodness, there is no moral obligation. The above view of Lotze shows a distinct trace of the influence of Hegel, as will do also many other systems of thought which were written after Hegel. Interpreters are at variance as to whether Hegel's absolute had any personality or not; to mention only two, we have Dr. Mc Taggart holding the impersonal view in his Hegelian dialectical cosmology and Dr. Halder, in this country, holding that the absolute of Hegel had a super-personality.

But before we turn to the thinkers who are more or less influenced by Hegel, I must turn particularly to Martineau, who has made a real contribution to religious thought. He defines religion as the believer's worship of supreme mind and will, directing the universe and holding moral relations with human life. In religion the apprehension of truth and the enthusiasm of devotion inseparably blend. He points out that religion was in the old sense at once a mode of thought and mode of feeling. It is only by an artificial separation, that we now call study of the intellectual side theology, and the affectional side religion. In reality, however, these two are but the two aspects of the same thing. Every act of admiration, wonder or reverence cannot be called religion. Moral attributes are also contemplated with feeling. But they are not by themselves religion. It is contended by many that the theologic association is superfluous. Every form of enthusiasm, be it of science, of art or morals, suffices to constitute religion. It is further held that it does not matter anything to religion if we deny the presence and agency among the phenomena of an ordering mind, for, even with such a

denial of a legislator, we may yet recognise the Law; and it is further held that a study which denies God may yet be called theism. To a man of science God is merely a synonym for nature. Sometimes such views resolve all into phenomena related in time and place. Sometimes Nature is substituted for God. Martineau thinks that we can only recognize the immanence of God in Nature and its living energy and powers. But nature cannot be all; the emergence of nature implies a source which is supernatural. Nature is subject to birth, growth and decay, but God, the universal cause, cannot be so.

Theism may undoubtedly announce itself as a purely ontological doctrine, with the recognition of an intellectual power, as the disposer and sustainer of the universe laying down his own laws. But religion, as the bare basis of divine omnipotence administering universal law, cannot institute a duty or provide us with a possibility of morals. Without an internal enactment of the soul the consciousness of right would be impossible. If, on the contrary, we were to start with a profound sense of the authority and sacredness of the moral law, without even turning to superhuman beings, we shall find ourselves penetrated by a secret worship of honour, truth and right. Were this noble state of mind brought out of its impulsive state and made to unfold its implicit contents, it would indeed reveal a source higher than human nature for the august authority of righteousness. The apprehension of such an authority and our obligatoriness to it, implies a perfect will, for, an obligation must necessarily to be a person. Ethics, therefore, has practical existence and operation prior to any explicit religious belief. The law of right is interwoven with the very tissue of our soul, and goes along and throbs with each movement of our experience. The simple ethical conscience with its intuition of what ought to be, beyond anything that is, has contact with a mystery to which it conforms without consciously quitting the ground of common place. It is a commandment speaking in the imperative voice issuing from a sovereign king. It discloses to us an unseen communion. This point of contact effects the transition to the spiritual life. Thus by the assumption of morality with its fullest significance we are naturally led to a supernatural per-

sonality who is the upholder of the moral law. Martineau attempts at great length to prove that force is the only cause, and that will represents a mysterious force. The world itself is but a heap of powers, and that God exercises His force in determining all things in the universe. That the events of the world are guided by an intelligent will, is proved by the inherent teleology and purposiveness of the universe.

But apart from the point of view of casuality, our moral experience reveals the nature of God as our highest, blending in Himself the superlatives of all we hold as great and good, the eternal life of moral perfection. It is certain that till we are contradicted we are carried by our moral nature into the conception of God which is the transcendent form of our own aims and prayers. The fact, that our nature does not give us any encouragement to the solitary monopoly of good, the social feeling that we share even with animals, that our repulsive passions are only for self-defence and that our affections are the positive powers which are continually displayed in our actions, the devotion of the mother to her infant, of the nurses to the sick, all show the benevolent nature of our moral being which has sprung from God, and which indicate God's benevolent nature. From the constitution of humanity we know the character of God who made it, and this can be said with reference to other virtues also, such as justice and friendship. The revelation of the all-perfect, through the deepest of all personal experiences is not simply individual but human, not a confidential whisper into each ear, but one tone, rather one harmony vibrating through the universal medium of spiritual existence. God stands in one relation to all of us, hence the knowledge of Him and the life in Him emerge from the level of a solitary faith and become a principle of union interpenetrating the social attachments and interpreting their intensity and stippling them in new and fairer meanings. Once bent before the authority of God, you can reserve nothing from it. It covers every obligation, it is not that it creates another separate sphere of duties and adds a department to the claims upon the human will, but it transfigures and elevates the work and affections of every relation, be it domestic, social or political. The moment that we apprehend the spiritual unity

of our nature and of the all-righteous as its source and head, the idea inevitably follows of our united human life as constituting a kingdom of God.

Martineau admits the existence of pain, but considers it as necessary for forging our moral life. Temptation arises from want of concurrence between the scale of strength and the scale of worth in our springs of action, but yet the moral strength often survives and in spite of the rolling dust with which we may besmear ourselves we find that we may, in the end turn to the right path and wash our sins off and all our dirt. There is a divine guarantee against the perpetuity of corruption.

We may now take up some of the other philosophers who lived in the 19th and the 20th century.

Bradley starts with the definition of truth as consistency and holds that whatever is inconsistent is false. He takes up for criticism substance and attribute, and shows that a substance is incomprehensible with or without quality or by itself, and qualities are also incomprehensible with or without substance and by themselves, and he points out also the incomprehensibility of other categories such as space, time, relation etc. His conclusion is that all our categories of thought and, indeed, all our experiences are fragmentary in their nature and this fragmentariness is manifested in the self-contradiction and incomprehensibility which are revealed to us, whenever we try to understand rationally any experience, whatever may be its nature. His conclusion, therefore, is that reality is an experiential whole wherein all the fragments of experience are melted together. Bradley did not accept in detail the dialectic development of Hegel, and so for him there is no process or movement by which the fragmentary realities find their completion in the absolute as the highest development. The absolute thus is a static experience, involving and completing within it all movements of fragmentary experience. From the point of view of each experience, it is thus both immanent and transcendent. All the movements and imperfection of fragmentary experiences so appear only because they are looked at from outside. In the reality of experience, in the absolute, they have lost all their individual character and become welded into one uniform experience as one whole. But though

he does not accept the dialectic development of Hegel as an actually evolving process, he thinks that there are some fragmentary experience which requires less self-completion, and hence may, in some sense, be regarded as nearer the Absolute; whereas there are others which require a longer course of self-completion, and are consequently further off from the Absolute, and he holds that in accordance with this the former may be said to be more real than the latter. Each fragmentary experience requires another completer whole before it can be established and that whole requires a still complete whole and this process leads us ultimately to find completion in the Absolute. That experience, which requires a longer circuit, before it can be assimilated in the absolute, is more abstract and in a sense remoter from the Absolute and is to be considered less real. This he calls the degrees of truth. This reminds us how Bradley accepted Hegel's principle of the chain of the dialectic development of the categories without accepting the inner movement, and without attempting to demonstrate in detail which experiences are nearer to self-completion in the Absolute and which are further off. Bradley says, in his essays on Truth and Reality, that Absolute cannot be equated with God, for God is a concept of religious consciousness and related to individual soul, whereas the Absolute is unconnected with anything. It is the annulment of all finitude. He says that the concept of God is best with contradictions, for "God must be at once the complete satisfaction of all finite aspiration, and yet on the other side must stand in relation with my will. Religion is practical and on the other hand, in the highest religion its object is supreme goodness and power. We have a perfect real will, and we have my will, and the practical relation of these wills is what we mean by religion. And yet, if perfection is actually realised, what becomes of my will which is over against the complete Good Will? The inconsistency seems irremovable and at first sight may threaten us with ruin". It is only by postulating God as good and not perfect and limited, a being superior to us who always tries to do good but is always limited in his nature, that we can save ourselves from contradiction. But by postulating God to be imperfect we take away from beneath our feet the infinite assurance and hope that can be bestowed on

us by an infinite and perfect being.

It is, therefore, clear that we cannot hope to have ultimate theoretical consistency in religion. The ideas which best express our highest religious needs and their satisfactions must certainly be true, but they do not possess ultimate truth and we do not know how to make it possible. Viewed from this point religious truths are only partial truths. If the object of religion is to be realised in the fullest sense in my will as the supremacy of goodness, then the ideas and the practices called for by this object are true and right. But a God that can say to Himself 'I' as against you and me is not defensible as complete truth for metaphysics. The doctrine, that there cannot be religion without a personal God, is rather untenable. The personality of God cannot satisfy our last intellectual demands. If religion is a two-sided affair, to feel the unity of God in me, is to destroy religion.

If we assume that we individuals are real in our own right, then to speak of God as having reality in the religious consciousness is impossible. God must be another independent individual like myself. But the independent reality of the individual is fragmentary and illusory. Apart from the community what are the separate men? It is the common mind within him that gives reality to the human being, taken by himself he is not human. But the difficulty of religion is that it is a relation between one individual and another and God. The feeling of the supreme will within us is not the will of God but of the common mind. A genuine religion must in the end be pantheistic. If the spirit of God can be within my soul in supreme union, this is but another name for pantheism.

The idea of immortality is only a recurrence of savagery within us. The fears of the old savage and all the cruelty of his life lie deep-seated in our nature; the old savage demands for feasting and drinking, for hunting and fighting, still reside in us and bring within us the desire and demand of a continual existence, but there is no elevation of feeling in it so as to justify us to think that it forms a legitimate part of religion. We live and progress by our life and work of today, and whether we exist or not after the fall of this body, is wholly immaterial to our ideas of progress and the

attainment of the good. We thus see that Bradley cannot support religion, the personal God, awaiting to meet the immortal spirits. The independent individuality is for him a contradictory and illusory concept. Bosanquet's philosophical view has the same ring as that of Bradley, though it has not the same dialectical method of treatment nor the same clarity of expression. He attempts to build up his theory of the concrete universal as his philosophy of the Absolute, and from this he passes to the problem of religious consciousness. He starts with the analysis of the conception of individuality and tries to show that our individuality by itself and apart from the environment has no meaning. The content of our individuality grows richer and richer as to include within it not only our immediate neighbourhood but the whole universe, for each part of the universe is unfulfilled and incomplete without the other parts. The universe is as a whole self-directing and self-experiencing, our minds are members of it. But the supreme principle of value and reality, will be wholeness, completeness and individuality. The self is at its best and fullest when the not-self is most expanded and also most harmonious with it. The sense of distinctness is not lost, on the contrary, the sense of having yourself in another is an essential of satisfaction. Though hostility to the not-self may help in awakening self-consciousness, yet a harmony in distinction with the not-self is a deeper element in self-assurance and one that increases in the perfection of the self. The self advances in its progress by connecting within itself as its part, all that is hostile or opposed to it in its expression of individuality; as this self grows richer, it has other things opposing it, which are also swallowed up by it until it reaches the Absolute. All nature being present in the mind and grasped only so far as she is so, she is present with her laws before the self as its environment, and therefore, as its part.

The facts that the religious attitude is largely practical, and that religious tradition admits its contemplation of God in imaginative shapes, are thus obviously in agreement with each other. Father, son, holy spirit, lord, omnipotence, creator, providence are not terms which apply to an unlimited Absolute which has nothing beside it. The practical attitude shows that

the contradictions between good and evil are not annihilated and God worshipped in religion, is not one for whom evil is annihilated. Though evil is not in Him, evil is essential to finite freedom and these finite ones are continuous with God. If God had no concern about the triumph of good over evil, He would not be worshipped, and there would be no belief in any miraculous communication of grace from God to man. The divine intercourse with man is indicated by nature and society as Green explains in his Prolegomena to Ethics. God, who is worshipped in religion, is the will for good as against evil, and the universe which is antithesis to good, cannot be one with God. Bosanquet says that the truth of religion involving the existence of God, does not come to us as something forced by metaphysical or theological argument. It is only a leading characteristic of experience; its onward aspect, in itself a mere fact, is guaranteed, first by the naive unity of human beings within it, and in later and reflective ages, by the comparative sciences which recognise it as a phenomenon co-existensive with humanity. Its value and its interpretation are primarily self-contained and are part of the experience itself. Christianity assumes as its foundation the existence of an infinite personal good and a finite human will. This antithesis is assumed but not proved. No argument can establish it. Each man for himself is supposed to be conscious of the existence of God and of his own existence. Whatever is projected, therefore, by religious consciousness has no guarantee of truth, but can only be taken as an integral part of human psychology.

Lord Haldane, one of the followers of Hegel and an acute thinker, objects to the view that the thought should merely be a function of the brain. This analysis which takes mind as merely a function of the brain is not sufficiently deep. The picture, that the thought makes for fulfilling its purpose, is thought's own. It should be noted that though the mind thinks in a particular manner under the environment of space and time with reference to the external world, where we have our purposes of life to fulfil, mind does not always think in the same manner in other spheres. In Mathematics and Physics we proceed by way of abstraction, but in the case of art we

proceed with concrete immediacy of synthesis and in this field progress of thought does not necessarily mean advancement. No one has yet superseded a Dante, a Shakespeare or a Goethe. In Philosophy also, a later thought is not always the better; but in the evolution of concepts in time the past systems are not left behind but they reappear in a more and more significant form. Hegel said that the world, whose depth is penetrated by thoughts, is thus erected as a beyond over against immediate consciousness and present sensation. The power which thus rescues itself from the actuality and finiteness of self is the freedom of thought in knowledge. But the mind is able to heal the schism, which its advance creates. It generates out of itself, the works of fine arts as the first middle terms of the reconciliation between pure thought and what is external, sensuous and transitory, between nature with its actuality and the infinite freedom of the reason that comprehends.

Thought thus proceeds in a manner which is beyond the depths of psychology. To think is to create, and when we say God thinks, His thought is His will and His creation. Self-consciousness is the highest of all categories, and is the basis of all intelligence. It is, therefore, the presumption of our reasoning about the nature of ultimate reality. The self-consciousness of God implies that His ends are realised by the very thought He proposes to Himself; there is no imagery by which we can explain the spontaneity of the creative thought, yet His thought also involves the positing of anotherness, but as there is nothing other than Himself this otherness is also a manifestation of His self-consciousness. The thought of God is not lifeless, as Spinoza conceived it, but is all moving. This aspect of His anthropomorphic conceptions must be dislodged from our minds. God's thought is for Himself an active reason which comprehends everything within itself. In the mind of man also, which seeks to distinguish itself from its other or not-self, there arises a world of appearance in relations of isolations. When man understands nature he does it for himself and the nature that appears in his thought, is not the same as the nature which is beyond his thought. The forms of finite minds and the differences, which are thus created, have their

value and meaning and justification as stages in dialectical movement, in which the absolute mind moves and creates itself through the finite centres. Without our creations God would not be perfect. In Him they are comprehended and transformed. It is only because the finite spirit moves by its own free will and makes its choice for its own ends, that it appears to be separated from God. But in the spirit that knows itself as one with God and His ends, this aspect is comprehended and superseded. Thus the thoughts of the individual minds are not limitations of God's thought, as they are but moments in the thought of God. In art and in religion we transcend our finiteness, we die to live again. The medium of religion like that of Art is not abstract philosophy. Religion is a practical matter. It belongs to the will and reveals it emotionally and proceeds out of the consciousness of a direct relation to God. Under its own forms it grasps the presence of God as here and now. It is for this reason that religion expresses itself in imaginative forms, the father and the son, the crucifixion, the sacrifice and the rituals. The metaphysical background is the self-thinking Absolute Mind in which the finite minds are moments which are at once one with and different from Him. The Father sending His only begotten Son represents the otherness or the separation of the finite mind, and the synthesis is accomplished by his redemption and return unto Him. In order to be a finite man, man must be separated from God, and it is His duty to annul the separation. The choice of the higher plane involves self-surrender, the surrender of particularity. Evil and sin are thus moments, necessary moments for being overcome. The love of God is just this consciousness of the potential unity of the finite and the absolute self.

Ward in his "Realm of Ends" admits the superiority of the theistic position. Every one of the finite individual is related to all the rest, and only for himself. But this unity also implies a higher type of unity than this in our own experience as self-conscious subject—the experience of a living and active spirit whose centre is everywhere and whose circumference nowhere. God is not simply a transcendent being, but he is also immanent and active within the world. Such active presence of the one spirit supplies us the assurance that we need, for in postulating Him

we postulate also His benevolence. God who knows all, loves all. But all the attempts to prove the existence of God have been very successfully demolished by Kant. But though we cannot demonstrate His existence, it does not follow that the assumption is theoretically worthless. We cannot directly see that the sun is at the focus of the planetary orbits, but if we assume it we can explain well the planetary motions.

But if God exists, does He create? And what would be the nature of His creation? The psalms say that the heavens declare the glory of God and the firmament showeth His handiwork. Possibly it is so, but there is nothing in our physical experience that compels us to admit it. Moreover creating out of nothing is self-contradictory. The view that creation is an event cannot be supported. If God be regarded as the ground of the world, then the cessation of the world would mean the destruction of Him. The only meaning of creation, that can have any appeal, is in the present case that of intellectual intuition. It is said in the Bible 'The Lord seeth not as man seeth. For man looketh on the outward appearance but the Lord looketh on the heart.' It is only for creative intuition that the knowing and being of objects could be said to be in any sense the same. An analogy may be shown as when we refer to Antigone of Sophocles, Shakespeare's Hamlet or Bethoven's 9th symphony, which are their creations. We are quite sure that if their authors have not created them they would not have been produced. The originality of geniuses leads us to conclude that they were inspired. As Shakespeare's Hamlet was intuitively perceived by him as one artistic piece, and as it was this apperception of the work of Hamlet in his mind that constitutes its creation, so the world may be regarded as the intuitive intuition of God and it is in this sense alone that the idea of creation may be referred to God. But in creating this world God limits Himself and apart from it, we have no basis for our ideal of God at all.

Royce starts by defining God as an omniscient being. By omniscience he means that he has all-embracing, direct and transcendent insight into his own truth. The full answer to every genuinely rational question can only be possible when one is in direct presence of facts and experiences which are found as

the fulfilment of certain ideas and as the verification of certain thoughts. Where the experienced fact, actual or possible, is remote from the idea or thought, we have the epoch of questions. The divorce of idea and experience characterise every form of our human consciousness. The being, in whom there is no such divorce of idea and experience, would possess absolute thought i.e. a self-contained thought sufficient unto itself and needing no connection or supplement. It is for this reason that God is called absolute. On the other hand our experience changes with the current states of our own organisations, rather than reveals the reality beyond, and this reality remains unknowable. But this ignorance of absolute reality implies that there is some possible experience, some state of mind which we do not possess. But our present ignorance only proves that our states are not so organised that they can know it. That does not prove that it is by nature unknowable. Our conditions are so organised that we can only have fragmentary experiences which gradually move on and on through relations, but are never completed. If the world-reality as a whole is to have any existence, there must be an absolute experience to grasp it. Thus even in trying to deny absolute experience one has to accept it. There is an absolute experience for which the conception of an absolute reality i.e. the conception of a system of ideal truth is fulfilled by the very content that gets presented to this experience. The Absolute experience is related to our experience in the same way as an organic whole to its fragments. Royce, however, thinks that the Absolute experience sees the perfect fulfilment of thoughts or ideas. This fulfilment constitutes what the Absolute as such sees and without which the Absolute is no absolute. The Absolute unity of consciousness, Royce says 'contains, involves, includes not merely the infinite types of self-consciousness, not merely finite contrasts of self and other, but the contrasts and the consciousness of its own being as thinker, experiencer, seer, and as love or will and all of these as essentially inter-related aspects of itself as unity. In this, which I take to be the only defensible sense of the doctrine, I regard the absolute unity as essentially inclusive of various inter-related forms of absolute self-consciousness. It is here that Royce differs from Bradley,

for the former is unable to regard the categories of self-consciousness, as mere appearance, or to regard it as lost and absorbed in the Absolute. The Absolute thus in the only logically possible sense of the term is through and through permeated by self-consciousness. The Absolute unity, in the unity of a variety of mutually inter-related and inter-penetrating conscious functions which, though contrasted, essentially refer to one another and are fulfilled, each, in and through the others, so that they may well be called by virtue of the contrast, conscious self, is being conscious that the other selves, his divine fellows are, in essence but himself fulfilled and wholly expressed.

Howison, however, conceives the reality of the spiritual world as consisting of God and the republic of man; that the creator and the creature are reciprocally and equally real but not identical, that there is fatherhood of God and brotherhood of men, and God recognises rights in the creature and acknowledges duties towards Him and that men, therefore, are as real, as indestructible as God.

We have tried to hold in long array some of the important philosophers particularly in their outlook on religion. Our treatment has not been exhaustive, but it is hoped that the types chosen have been such as to illustrate the fate of religion at the hands of philosophy, which with the advent of science and the advancement of critical thinking during the 18th and the 19th centuries, have entirely changed the outlook of the western world. Kant had destroyed the ontological and the cosmological proofs of the existence of God, which had so long been the main stay of theological proofs regarding the existence of God. Kant's religious position is obscure and he has not been able to decide definitely upon the question of man's relation to God. He thinks that religion consists in regarding our duties as divine commands, but elsewhere he regards the duties as proceeding from the rational will. If we are to regard rational will as the command of God, that will merely be a subject of conception and not an objective certainty. Kant indeed concedes to the possibility of revelation or even its necessity, but does not provide for it. Once the theory of revelation is admitted, one bids farewell to the anti-

nomy of will. But although the revelation is an affair of the human spirit, it might equally apply to thought and will. In his Critique of Pure Reason he had destroyed all possibilities of the objective certainty of knowledge. Herder wanted to substitute Kant's Critique of Pure Reason with a physiology of the cognitive faculties, explaning the evolution of the higher from the lower faculties, and rejecting the distinction between a purely receptive sensibility and a purely spontaneous understanding. Herder further maintained that the Christian spirit is neither the principle of magical inspiration nor simply the legislative reason, but is the inward impulse to truth and goodness, as inspiring our internal enthusiasm for truth and love, and supplying us with an ideal for betterment. Not only was Herder's religion of etiquette, goodness and loving kindness larger hearted than Kant's religion of right duty, but it fitted much better to the historical element of Christianity in general. Kant's religion of reason with his principle of moral interpretation was less reconciliatory to the words of the Bible than Herder's religion of humanity. Herder emphasised the content of religion as consisting in the emotional disposition of the heart. Fichte, however, again unfurled the banner of religion in an age of ungodliness. He held that religion is superior to science, because it does not confine itself to contemplation, but becomes a practical energy in the will to do all and every duty as the will of God for us and in us. Religion is, in a word, the love of God in which man feels God within him and surrenders his own personality to Him. For him, quite like Spinoza, the devout love of God was absorption into Him. It is in this way that God's own love to Himself becomes conscious in man in the form of feeling. This devout love of God is not exhausted in mute contemplation, but manifests itself in an active and joyful love of man. The divine germ exists in every man and is alone responsible for the elevation of the human race.

Though Newton himself believed in God, he shared with Boyle the belief in a mechanical theory of the universe based on a physical cause of gravity, that this hypothetical agent determined all the motions of the heavenly bodies throughout the

universe. The main discovery of all matter being of the nature of atoms, only strengthened the mechanical view; and the reaction of this scientific or mechanical outlook of things, associated with the discoveries of Copernicus and Huyghens, gradually weakened the faith in God as both a transcendent and immanent worker. This tendency showed itself in the Deists of England. The political conditions of the continent, together with the scientific achievement of the age, led to the growth of scepticism in France. Intellectual intercourse between England and France was free at this time, and in France of that time we find a galaxy of writers. Bayle, who wrote a work on the contradiction between reason and revelation is one of them. From Bayle we come to Buckle and Voltaire, the latter a great follower of Newton. Diderot and many of the Encyclopaedists also contributed their might in weakening the hold of the supernatural and the mystical in religion. Nor can we ignore here the contributions of Lamettrie, Arnobiuas and Condillac. The mystery of the soul as a divine particle was exploded. Thus Condillac said that if we put in a new-born child in a feebly illuminated subterranean chamber, from which all sounds and sound impressions are removed, and the child is nourished by a naked and ever silent nurse, without any knowledge of the world till he is twenty or thirty years of age, he will have no answer and no word will have any significance to him. Man is thus merely a machine on the physical side, a product of education. We must also in this connection take note of Holbach and his materialistic philosophy which is a direct outcome of the scientific age. Then came the French revolution which destroyed the special position of the priest. The reaction against this materialistic tendency no doubt, took place particularly in the philosophy of Leibnitz and Wolff. But Leibnitz's philosophy was no theism. His theology, in which God is viewed as a parallel monad, and in which all the monads were regarded as living within closed doors and developing within themselves, and in which the correspondence came only by a pre-established harmony, interpreted religion in an altogether different manner. It is difficult to see how God, enclosed within Himself by the necessity of His monadic life, could arrange the harmony

out of Himself. But apart from this and other intellectual difficulties, with which we have no concern here, the Christian idea of separation from God, fall and the sin, the atonement and the redemption, the emotional flight of man to God, and the love of God being reborn in man and drawing him upto Him and the fundamental creeds of the Christianity are distinctly abandoned. The God here is a philosophical God, and not the God of religion. Metaphysics was thus gradually becoming another type of idealistic materialism which ignored other functions of man in favour of merely logical consistency. Berkeley also, in holding that every thing in the world is but a chimerical illusion and that the whole universe exists in ourselves and our imagination, made religious struggles devoid of their reality. There could be no scope in such a system of emotional approach to God or the love of God for man, or the foundation of religion and ethics. He was merely a metaphysical being containing multitude of ideas, which he continually impressed upon our senses. If everything was thus impressed upon us by God, where is the scope of the freedom of the will and acting through difficulty over the evils and obstacles of life becomes impossible. If all knowledge is reduced to mere subjective phenomena, the will is also reduced to that stage and the backbone of religion is destroyed. Hume's phenomenalism also nullified the causality of God and the causality of the will, not to speak of the emotional approach to God and His love of mankind.

Sir William Hamilton, after a thorough going research in psychology and logic, held that the last and highest consecration of all true religion is to the altar to the unknown or unknowable God. To think is to condition, therefore, the knowledge of the unconditioned is impossible, yet we are forced to believe in an unconditioned reality lying beyond the conditions. But if the absolute and the infinite are incognisable by us, if they cannot be construed to thought, what are they? They are simply the negation of the finite. We can thus have only a negative notion of the absolute and the infinite. We have thus to take recourse to faith not as mere irrational or unjustifiable credulity, but as a rational trust, the spontaneous adherence of our

nature to the conviction that behind all that is relative there is the Absolute, and that what appears is simply the manifestation under conditions of finite experience, what is behind it all. Sir William Hamilton was aware of the frailties of our conditioned thought and faculties, though he does not regard them as deceitful. John Stuart Mill (Born 1806), on the other hand, had no sympathy with Hamilton's Absolute unknown or unknowable, to whom no attribute such as knowledge, mercy and love should be applied. He, therefore, criticised strongly Mansel's lectures on the limits of religious thoughts, in the most scathing and effective manner. He held that in the face of our harrowing experience of nature, red in tooth and claw with ravine, and of the unutterably hard and harsh experience of life, he could not think that there was a master of the world who was omniscient and omnipotent and yet all loving. But he was not unwilling to believe in a power of goodness or of love who would if he could, alleviate the miseries and sufferings of the world, if he was not hindered by the unfortunate circumstances of the world. This admission was combined with his admiration for Jesus, as the highest of ethical teachers. But the intellectual impulse of the 18th century was not favourable for materialistic thought. Not only the influence of universal traditions of the ruling powers in state and church were deprecated, but people were getting tired of materialistic dogmatism and longed for a revival of poetry, art and religion. The idealistic longing was gradually showing itself in the brilliant epoch of Schiller and Goethe. Mysticism and rationalism became allies in the battle against ossified orthodoxy. While Hobbes admitted the right of the people to transform a general superstition into a religion, and while Voltaire wished to retain the belief in God in order that the peasants might pay taxes and rents and obey their superiors, in Germany the idea went on, that truth dwells with the persecuted, the oppressed and the calumniated, and that every church in possession of power and dignity and endowments, is by this very circumstance inclined to persecute and suppress the truth. The discovery of Sanskrit and Avestan languages, regarded sometime before by Dugald Stuart as a forged and fictitious language

which had no real existence, led to the foundation and development of comparative philology, mythology and religion and broadened the outlook of humanity and human culture.

The revival of Greek learning and the study of Greek art by such men as Winckelmann and Lessing, brought men in touch with humanistic culture of Greece. With this circle of thoughts and feelings, Spinozism had a greater chance than materialism. Goethe protested against our conceiving the God of Spinoza as an abstract idea. He was, according to him, the most real and active unity. "I am that I am and in all the forms in which I may appear shall be what I shall be". Goethe thus turned away from the Newtonian God, who only impels from outside and decidedly held fast to the divinity of one inward essence, which appears to its own phenomena, to men only, as the world while in its true nature it is exalted above any conception of ours. He felt great sympathy with the Spinozistic ethics, and when disturbed by any outward circumstances he would see God in nature and nature in God. Speaking of Holbach he says, 'How hollow and empty did we feel in this melancholy atheistical half night, in which earth vanished with all its creatures, heaven with all its stars.' The Spinozistic tendency, which in a modified form influenced Goethe is the idea of a reality, not as the unknown and the unknowable of Spencer and Sir William Hamilton, far beyond the ken of experience, but as the self-moving, self-directing thought which comprehends all within it. The most important exponent of this class of idea was Hegel. Instead of the brute materialism of matter being the source of all we have here an all-engulfing thought, which engulfs within it all other forms of reality. Thought externalises itself into the objective world of nature, society and the state. The deduction of the categories, in spite of its many defects, can be regarded as being in some sense unexceptionable. But when he held that a process of logic can deduce an existent thing from a mere thought it could be taken as an empty delusion as many of his critics said. But Hegel did not actually deduce gross matter in its intense particularity as 'this stone', 'this animal' or 'this plant', but what he tried to deduce was the conception of nature, society and state. Thus

through his bold adventure he was stressing thought in its manifold transformation, and tried to demonstrate how one conception was linked with another and passed on to another by assimilating the contradiction that had separated them. Each conception was like a flower in a garden, the analogy failing only in this, that one thought was essentially the other thought in a continued process of development. In such a pantheism of thought the particularities were not taken note of and the development was conceived through another, which was always regarded as an opposite. The fact that the distinct and the particular have an all-absorbing interest for us, leading to their treatment as separate, was unacceptable to Hegel's mind. He thought therefore, that since all is thought, one must imply the other. The concept should divide itself by a movement internal to itself and throughout this act of self-distinction it will maintain its own identity for this reason. Vico also conceived philosophy not as a cabinet with separate pigeon-holes, but as eternal ideal history in which particular histories appear in time. But the attempt to connect all departments of thought in a progressive chain, denies the obvious truth and reality of the different departments of a man's personality. To say, that the spirit, not being satisfied with art, passed on to religion, is a mere metaphor. The facts of artistic notion may have contradictions within them, which may be swallowed up in more and more complex notions, but, as art does not contradict itself as art, so religion does not contradict itself as religion. Everyone knows the complete satisfaction, the profound and untroubled pleasure which springs from the enjoyment of a work of art. We may pass from art to religion and religion to philosophy, or from philosophy to art or to religion. This passage is not due to gradual degrees of complexity, but to the inherent nature of our personality wherein distinct departments of self-realisation exist and for the sake of those specific departments of mental experience. There may be internal relations between the various departments or groups of our experiences, religious, artistic, philosophic and the like through the fact of their being welded together in the formation of one personality; but it would be wrong to suppose that these different depart-

ments are the products of the two ubiquitous categories, being and non-being, with which thought starts. The evidence of psychology and anthropology and sociology brings home to us the fact that man develops various feelings, ideas, tendencies and inclinations, modes of finding enjoyment, different levels and different dimensions pari passu. A man displays a keen interest in the discovery of scientific truth in philosophy and logical debates and also a great inclination to sports as also a passionate love of music. It would be wrong to suppose that any of these types of inclination is a development from the other. Religion is as much of primary interest to a cultured man as art and philosophy may be, but to take them away from their concrete aspect as artistic, religious or philosophic spirit, and to Platonize over their ideas as being connected in a chain of self-developing movement, is to do violence to the concrete actuality of human personality.

The fault of Hegel, as of almost all Hegelians, consists in considering abstract thought or notion or conception of a concrete and actual reality as the only reality about them. It would be, as if, a fabulous animal whose perception was one dimensional, was taking a measure of things that exist in three dimensions, and declaring his perception of them as being the only real one. We have our feelings, our volitions and our thoughts. They may have their unity somewhere, but whatever unity they may have, they are distinct and different and it is wild to attempt to derive the one from the other. It is for this reason that the Hegelians failed to make any provision for will and emotion. As materialism was onesided, in trying to deduce everything from matter, and thus became a menace to religion, the pantheism or all-ism under whatever name or form it masqueraded, became an equal menace to religion.

Another class of thought beginning with Sir Thomas More's Utopia or Bacon's Nova Atlantis, Andreas' Christianopolis, Campanella's city of the Sun, Hobbes' and Rousseau's Social contract theory, the labour theory of value, Harrington's Oceanea, Peter Chamberlain's scheme of nationalisation, was preparing the ground for ushering in a new state of things in which miseries of economic conditions could be removed. The

French revolution produced an entire change in the social order. Men were made equal before the law. The Bourgeoisie wielded the power formerly possessed by the title class, but the peasants and the city workers still remained the bearers of the burden of society. Rousseau advocated the total abolition of the reigning order and contended that private property was being plundered, and longed for the golden age in which it would be abolished, and a new state of things introduced. This state of things led to the rise of many socialist Utopians. Babeuf proposed the nationalisation of all products Cabet published his "Voyage to Icaria", the ideal city where the state possessed all the industries which had no newspaper and all wore the same kind of dress. Saint Simon wrote his new Christianity in which he declared the brotherhood of man as the fundamental principle. The chief business of religion should be to help society. To stop all war and conflict he proposed an European parliament and a universal association guaranteeing labour for all and for making awards according to merits. But Simonians were no communists. We have also in succession of three great socialistic thinkers. Fourier, proposed a reconstruction of the society for guaranteeing peace and calling attention to the waste in the modern economic system and the unnecessary hardship of labour. Blanc who regarded the development of personality of every member of the society as the chief aim, proposed free workshops for the people which would ultimately supersede individual work-shops, service according to capacity but rewards according to needs and thought that misery restrains the intelligence of man in darkness, counsels the sacrifice of personal dignity and lowers character. Proudhon, whose watchword was liberty, equality and fraternity, and who proposed to divide the country in small settlements in such a manner that there should be no king, preached that private property was theft and deduced his labour theory of value. He opposed the communistic idea of the equality of possession, but he advised the equality of the means of production. Many people were at this time preaching the doctrine of the undesirability of private property. As a result of an industrial revolution Locke declared the labour

was the title to property. Bentham declared that the best test of a good Government was whether it produced the greatest good of the greatest number. Thomas Pain proposed an inheritance tax. Godwin most vehemently criticised Government as an organised force for defending injustice and perpetuating inequalities. He also was a great enemy to the doctrine of private property. When Godwin's enquiry concerning political justice was published, Wordsworth, Coleridge and Southey were young and they were profoundly influenced by this book. Wordsworth felt that the travails of the time presaged the moral rebirth of humanity and hoped to see the establishment of an Utopia, not on some secret island, but in the very world that he lived. Thus Southey writes—

> No fancied boundaries of mine or thine,
> Restrain our wanderings! Nature gives enough,
> For all; but, Man, with arrogant selfishness
> Proud of his heaps, hoards superfluous stores
> Robs from his weaker fellows, starves the poor,
> Or gives to pity what he owes to justice.

Coleridge in 1794 proposed to Southey the organisation of a communistic colony. Shelley also remarked—

> The seed ye sew another reaps
> The wealth ye find another keeps
> The robes ye weave another wears
> The arms ye forge, another bears.

Ricardo at this time propounded his theory of value as depending on labour which was subsequently taken up by Karl Marx. As new machineries were being created, manufactures were growing, and capitalists were hoarding their wealth, and the intensity of class struggle was being felt. It was at this time, towards the end of the 18th and the beginning of the 19th century, that Owen, the founder of British socialism, began to preach his Utopian doctrine; and it was from this time particularly that peaceful socialism was developing the passive weapon of strike. The socialism of this period differed from the socialism of the later period in this that they drew their inspiration from the old stoical school, the principle of natural

justice, the doctrine of the primitive Christian, the humanist, and the rationalist. Their argument was like this: God and nature are good, since God made the world, the world also is good; or, a beneficent God could not have made it otherwise. Human society being a part of this world was intended by God to live in peace and harmony. Man is by nature good and capable of the highest perfection. The misery of society is due to man's tampering with the original communistic plan, by artificial devices of private property which has destroyed natural harmony and produced the consequent suffering. Those, who love mankind, have but one duty to perform, namely, to bring society to natural order. The fault that man has committed is not due to innate perversity but error of judgment and want of insight. Class-struggle is not the means of bringing happiness to society for it creates discord. Karl Marx, however, was the most important of all socialistic thinkers and he proceeded on entirely new lines. He used the Hegelian dialectic to explain the class struggle, private property being the thesis and the proletariate, the anti-thesis. As a result of the conflict a new form of society would arise which would be a mono-class or class-less society. We need not enter here into the details of the Marxian theory or its genesis from Feuerbach and Hegel. Marx was also indebted to many other thinkers such as Bauer Stirner and Hess and also Engels. Marx's doctrine is also called the Historical Materialism. Marx declared "that in every historical epoch the prevailing mode of economic production and exchange and the social organisation, necessarily following from it form the basis upon which society is built up and from which alone can be explained the political and intellectual history of the epoch; that, consequently the whole history of mankind (since the dissolution of primitive tribal society holding land, in common ownership) has been a history of class-struggle, a contest between the exploiting and exploited, ruling and oppressed classes, that the history of these class-struggle forms a series of evolution in which a stage has been reached where the exploited and the oppressed classes (the proletariates) cannot attain emancipation from the sway of the exploiting and the ruling class (the Bourgeoisie) without, at the same time and once

for all, emancipating society from all exploitations, oppressions, class distinctions and class struggle". The humanism of this movement has produced a new outlook which has tried to supersede religion. Thus Hess, one of the prominent thinkers of this new type of thinking, held that the root of religion was man's feeling and his acceptance of the order of the universe. The root of morality was the practical necessity of life. So long as men live in society they cannot be completely immoral. Irreligion is simply a word for other peoples' religion; immorality is a term for behaviours different from ours. The conflict between religion and morality can only be avoided if both observe a proper division of scope. Religion is a private matter that has nothing to do with politics. Let religion educate, edify and elevate the individual soul. Let it support the sick and console the suffering. But in public life let man show himself not in his individual, but in his general character. Religion is only a fiction and it can serve but little purpose, since it cannot conduce to social peace. "The essence of God" said Feuerbach "is the transcendent essence of man" and the real theory of the divine nature is the theory of human nature. Theology is anthropology. The nature of man is social, involving the co-operative activity of all individuals for the same ends and interest. The true theory of man, the true humanism is the theory of human society.

Communism came also to be regarded as the ethics of love. Socialism is not a matter of bread alone, although it may be that too, it is also a matter of man, of moral values and of human dignity. This is the truth that the communist aims at. The fact, that in order to move great masses into action, vehement lip-service to the ideals of love and humanity is necessary, indicates that the real nature of man recognises that these ideals alone are ultimately valued, and yearns for their fulfilment; but they can only be fulfilled when private property and the arbitrary power its possession gives over other human beings is abolished. Communism is the law of love applied to social life. It is not enough to preach love, nor is it necessary to preach hate. Love must be organised into action. Recognition of the identity of the real interest of all mankind must be carried

over into every phase of personal and social life. People say that one cannot serve two masters, God and mammon, but no one can serve either of them if he does not act like a human being. Love one another and unite in spirit, and your hearts will be filled with that blessedness which you have sought vainly outside of yourself in God. Organise and unite in the real world, and by your deeds and works you will possess all the wealth which you vainly seek in money. So long as you do not strive to develop your own nature, so long as you do not strive to be human, you will become inhuman and you will look down contemptuously upon human nature and treat the masses as if they were wild beasts. The beast is not in the masses but in yourself. Looked at from the proper point of view the communistic movement is a movement of humanitarianism. Not in terms of material interest only, but in terms of culture, creative activity, peace, honour, justice and other social and ideal goods. Hess proclaimed that it is wrong for the ideal communist to preach class-hatred. The chief achievement of Feuerbach was to dissolve the religious world and reveal its secular foundation. Feuerbach found the essence of religion to be rooted in the human feeling of dependence upon the external forces of the natural and the social world. Marx differs from Feuerbach and holds that this theory is too abstract and cannot explain the diversity in historical phenomena. Thus if in any religion there prevails the illusory belief in a God who created the world out of nothing, Feuerbach would say that this proceeds from the irrational needs of man's nature. In his Essence of Christianity, Feuerbach says that in such cases he defies his own irrationality. If on the other hand we find in any religion a belief in the eternity of the world, then the rational needs of man's nature is there emphasised, but Feuerbach cannot explain why in particular cases this rather than that was emphasised. Marx in reply says that religion is not born out of a natural and tragic split within the human breast. The real forces that impel man to find satisfaction in some dreamy corner, where they enjoy the uncontested power denied to them in this life, are not merely psychological, but social. The source of religion is to be found in the antagonism between the conditions

that men actually produce and the traditional, social, legal and moral forms under which that production is carried on. From this antagonism results the fragmentation of experience, the absence of the unified control of the collective lot and the worship of abstraction, which express the needs of daily life, the contrast between an everyday self and an ideal holiday self, all of which constitute the cults and theology of religion. Religion according to Marx, is to be construed from the real conditions of man's empirical life and not from his essence. If these conditions are such that they generate certain kinds of emotional conflict and theoretical illusions, then these illusions and conflicts must be removed by removing the conditions. He predicts that with the rise of a new social order the emotional conflicts and theoretical illusions of religion will disappear. Marx further says that religion is the opium of the people, and it is our business to awaken people from these drug slumbers; yet Marx did not ask his followers to make anti-religious propaganda. Without going into any further details about the religious views of Marx, Feuerbach, Hess and others, we may say that the whole of the socialistic movement, beginning from the middle of the eighteenth century, was directed to a concrete development of the will on behalf of humanism and on behalf of an Utopian stage that could be realised by a social transformation and socio-economical regeneration. An earlier thinker like Owen, was given more to an idealistic Utopian fancy, to a belief in a state of possible perfection just as religious people think of a heaven. The only difference is that in the view of these thinkers, the heaven of the fancy was to be attained on this earth. It was more a product of reason and emotion than of actualised will. But since the days of Owen till we come to Feuerbach, Hess and particularly in Marx and Engels, the movement took a concrete form and actualised itself in disciplining the will and putting it to the test of opposing obstacles in the sure faith of a final victory. Taken as a whole and excluding the undue emphasis on merely the economic side as in the case of Marx and Engels, it discloses a solicitation for human welfare in all its aspects as being the ideal of humanity. It dislodges the mind from the so-called redemption in an ideal world,

where Christ is seated on the right side of God. It disposes of the Christian creeds regarding the origin of sin, the fall of man, the birth of the man-god, the doctrine of atonement, the final day of judgment and the eternal heaven or hell. It brings down the attachment of man from the illusory dreams of religion to the practical daily needs of life. As a matter of fact it is not opposed to the humanism of Goethe, Schiller and Hegel, but it emphasises its concrete aspect, not merely by idealising, but by making actual attempts at the regeneration of society and transformation of political and economic conditions. It may thus be regarded as an important menace to the orthodox religion. Christianity no doubt has humanity as one of its most important creeds, but it always looks beyond rather than on this earth for the salvation of humanity. In the early days of Christianity people thought that the destruction of the world was at hand and therefore, they centred all their interest in the world beyond. They felt themselves as mere strangers on this world who will soon be called home. But the world was not destroyed. New knowledge about the world and its mysteries broke upon us and our interest in the present world grew much higher and greater than our interest in the world beyond.

CHAPTER IV

SCIENCE AND RELIGION

While the animals have an implicit trust in their sense organs, man consciously believes in the validity of his sense knowledge, and yet he knows that sometimes his senses delude him. An object at a distance does not present the same features as when it is near our eyes. He would therefore, like to compare the evidence imparted by any particular sense organ and judge whether there is any correspondence between the two. If in the twilight a piece of rope is misapprehended as a serpent, we may go near and touch it with stick or hold it with hand and judge whether our original perception of the object is true or not. When we find that there is a correspondence between the evidence communicated to us by our sense organs, particularly the sight and the touch, we are disposed to believe in the correctness of our perception. But we not only believe in the evidence of our senses, but also in the products of logical reasoning. We believe that what is rationally valid is also existentially true. It is for that reason that when mathematical reasoning comes into conflict with what we perceive with our eyes, we believe the mathematician and not our eyes. Just as we believe in Copernicus in preference to what we see everyday, that the sun rises in the East and sets in the West. Similarly, though revelation was believed to be true, man could not resist the temptation of trying to interpret it by Plato and Aristotle, both in the Christian as also in the Moslem world. With the renaissance in Europe, when scientific discoveries began to follow one another in various departments of knowledge, through observation and experiment, with the application of the inductive methods, they changed the entire outlook and the angle of vision towards religion. The older philosophies of Plato and Aristotle, which affected Christian thought in the first few centuries of the Christian era, dealt with problems re-

garding God, soul and also the moral problems and philosophy of nature, and dealt, therefore, with the subjects in which Christianity was interested. An interpretation of Christianity, therefore, by Plato and Aristotle was relevant. But science had nothing to do with God or soul or salvation, and therefore, scientific knowledge had no distinct connection with religion, but still the method of science and the demand for exact proofs, the discoveries of science also came in conflict with many of the accepted creeds of religion.

Scientific method is remarkably simple. It consists in the observation of such facts as may enable the observer to discover general laws which may govern facts of the type in question. It passes through two stages, one, of observation of varying degrees of refinement and the other, of inference leading to the discovery of laws. Scientific observations demand a careful choice of relevant facts and a colligation of the various ways of arriving at the general truths otherwise than by mere generalisation. A mere generalisation, that bodies when unsupported fall to the ground, is bound to be contradicted by the flying balloons, the flight of birds and the like. But the scientific observer knows the reason of these exceptions. Of course, there may be lapses in the working process of particular scientists, but that does not affect the scientific method. The Greeks in the past viewed the world more as poets and philosophers than as men of science. They distinguished themselves, therefore, in the fields of deductions, and not in induction, which forms the characteristics of the 18th and 19th centuries. The conflict between Galileo and the Inquisition is a conflict between the present and the past, the spirit of induction and deduction, spirit of science and religion. The deduction started from a known truth such as is found in a revealed book. Deduction falls to the ground when doubts are raised against the premises, and therefore, the believers in the deductive method, who have no other means of proving the premises except by faith, naturally grow angry. Gelileo questioned the authority of both Aristotle and the scriptures and the whole structure of mediaeval knowledge. His predecessors believed that they knew all the fundamental premises regarding the nature of the world,

man and God and that by a pure process of syllogism they could arrive at the answer of all questions. In some sense the cogitations of philosophers may be compared to the cogitations of the theological thinkers of the past, for, both have boundless confidence in the revealed or *a priori* premises and the syllogisms that can be drawn out of them. Hegel's philosophy and its wonderful arrogance of answering all questions is an illustration in point. But as the rising sun scatters the multitude of stars, so Galileo's few proved truths introduced a spirit that by its work banished the scintillating firmament of mediaeval certainties.

We can arrive at a scientific law through three main stages. We observe significant facts, and form a hypothesis which would explain them. We deduce from the hypothesis consequences which can be verified; when verified the hypothesis is provisionally true until it is repudiated or modified by the discovery of other facts. Scientific observations no doubt start with particular facts, but its interest is to establish generalities of which the particular facts are but instances. The laws that may be formed in such a manner may be more and more general and it is possible to imagine that there might be one universal law within which the other laws are included as special cases. The different general laws may suggest by induction a still higher general law of which the subsidiary general laws are but instances. Thus Galileo's law, that falling bodies fall with a constant acceleration if there are no obstructing causes, is a law of the lowest generality based upon the observation of a few facts. So Kepler also formed three laws regarding the motions of the planets. But Newton's laws of falling bodies collected together the laws of Galileo and Kepler, the laws of the tides and the motions of the comets. This law of gravitation showed why the previous laws, though right in a way, were not quite right. Bodies near the earth's surface do not fall with an acceleration which is absolutely constant for, when bodies come near the earth their acceleration is slightly increased. Planets do not move exactly in elliptical paths, but when they are near other planets they move a little out of their orbits. For over 200 years no greater generalisation was made regarding this

matter. But Einstein superseded this law by a new kind of generalisation as law of geometry rather than of physics in the old sense. Geometry has so long been regarded as *a priori* study like logic, and not an empirical science of observation and experiment. Lobachewsky, in the year 1829, proved for the first time that the Euclidean geometry could only be established as true by observation and not by *a priori* logic as it was believed to be so long. This view led to the foundation of new branches of pure mathematics; but it bore no fruit in physics until 1915 when Einstein embodied it in the general theory of relativity. Einstein's law is more general than Newton's, since it applies not only to matter, but also to the light and every other form of energy. Einstein's law requires for its data Newton's law of gravitation, the theory of Electro-magnetism, the science of spectroscopy, observation of light pressure, minute astronomical observations, and the perfecting of the technique of photography. Starting with Einstein's theory we can deduce all gravitational phenomena with greater exactitude than before. The process of deduction obscures the difficulty of the discovery, and it becomes difficult to imagine the immense amount of preliminary knowledge required for the induction which led to the major premise.

It is possible in an experiment to eliminate the causes and conditions that are not relevant to the fact. There, our chief aim is to isolate such conditions and circumstances as may be relevant to the test, to suggest one particular law, though in formulating that one law we may have to take the help of a number of other laws. With the development of technologies and the invention of various instruments it has now become possible to arrange extremely subtle experiments.

The subject matter of physics being very simple, it has been possible to make a greater advancement here than in other sciences, where observation plays a greater part, though the ideal is the same for all sciences. But it is doubtful whether a science like physiology could ever be as inductive as physics is. In physics also, the mathematical apparatus at our command is often incompetent to make the desired calculation. Every careful measurement is often involved with a probable error.

Even the most accurate observations may often contain a margin of error, and in the case of observations of very high velocities, the facts may change in the very process of observation. This has led to the principle of indeterminacy. But a physicist is never ashamed to admit the inaccuracy involved in the objective observation. But a theologian or a politician would seldom admit that he is in error. He would laugh at a scientist and say that science changes and take pride in the fact that his views never change. But the changelessness is no guarantee in any degree of the objective certainty of the facts they assert. In trying to arrive at exactitude, science proceeds by the way of successive approximations. No scientist worth his name would say that what he believes now is exactly right. He only believes that he is on the way to exact truth. If Newton's law of gravitation has been superseded by Einstein, it is not overthrown, but is only replaced by something more accurate. The aim of science is not to make merely affirmations or denials, but to measure accurately, as far as possible, the extent of affirmation or denial, whereas in religion we have no question of any measurement at all. But it is not always true that scientific laws are always quantitative. For example, admitting that Pavlov's theory of the condition of reflexes is correct, it is impossible to measure the number of repetitions required to produce the conditioned reflexes, for, it depends upon many conditions and has individual variation. Particularly in the biological field the complexity of circumstances are such that actual measurement is not possible and only qualitative judgments can be made.

But even in those cases where quantitative progression is available and experimental verifications can also be made, one cannot always be sure that the hypothesis is true. Thus in Bohr's theory of the structure of atoms, theoretical measurements of certain quantities were possible which hitherto could only be observed. But still in the end, Bohr's theory had to be abandoned. In the formation of theories we cannot often follow the subtle preciseness of logic and are often led astray by the attraction of a picturesque imagination. Our everyday world has a picture that we can see, but the world of physics is abstract

and has no picture for us to see, and therefore, even the most well-worked hypothesis may not be correct in the end. The logic of science proceeds with the assumption of hypothesis, formed on the basis of certain facts and holds that if that hypothesis be true certain consequences will follow. But it is extremely difficult to prove that no other hypothesis could explain the observed fact and unless this is done the truth of the hypothesis is only probable. Simpler the hypothesis safer would be the procedure of the scientist. But there are certain departments of knowledge in which scientific methods are not applicable. Thus history and geography lie outside the scientific methods. If a boy reading in the school refuses to believe that there was such a man as Julius Caesar, it will be impossible to prove his existence at any particular time by any scientific methods or by any argument. If one is not prepared to believe any thing that is not within his experience, and if he is not prepared to believe any thing on authority or testimony of others, no argument can convince him. Most of us have to accept certain things on the authority of others. I, for example, believe that there is such a place as Honolulu, but even then, I may refuse to believe another item of information on the authority of a geographer or an historian. If, for example, I refuse to believe that Sirajuddaulah had deliberately killed a large number of Englishmen in the most inhuman manner, in spite of the authority of many English historians and many others who follow them, no one can take me to task unless I was reading under an ill-tempered teacher. The limitation of scientific method is not only with regard to certain departments of knowledge, but also with reference to physical facts which come legitimately under the domain of physical science. There is, first, the difficulty of being certain, that an induction is valid, the difficulty of making the jump from the observed to the unobserved. We may add to it the fact, that inductions in physics being of a very abstract nature, may not in certain cases be more widely informing than the data.

From what has been stated it will appear that scientific investigation based as it is on induction, the unchallengeable validity of which can never be proved, is largely an attempt at

approximation through happy guesses. The senses that are given to man are limited to the present space and time. Our thoughts, which have any appeal to us, are limited to the principles of identity and contradictions. But our requirements are unlimited. They go far into the domains of the future and in spaces far away from our sight. Like the prince in the fable we want to have the magic wand to penetrate into the mysteries of the monstrous world of nature, and bring the monsters to submission and awaken the slumbering princess. The materials, supplied by the senses, pass through a physiological organism which may largely change their actual forms and create appearances far different from what they would have been, if they were not reflected through the psycho-physiological mirror. Then also, they are grasped and collected by the mind which follows its own law. The process of induction does not only involve a *petitio principii*, but it assumes that the universe is a determinate system of unity of such a nature that from observations of relations of particular kinds we may affirm similar relations in other unobserved cases. The chances of error, therefore, in our judgments about the material world as it is, are enormous. Again, any judgment, that one may make about any natural phenomenon, is really a function of the entire situation of which the observer and his co-ordinates of time and place are constituents. That being so, accurately speaking, the judgment of any two individuals granting that the other elements of the situation are the same and that their minds are operating in the same manner, cannot be the same. Again, the space and time, that are dealt with by physics, are not the space and time of our daily experience. The elliptical paths, followed by the planets, are very different from the drawing of ellipses on the chart. We can only say that certain relations hold in the physical world which are similar to certain notions of abstract logic and these only are available for mathematical treatment. In order to have a grasp of the world as a whole and its structures, the physicist has to leave aside the entire concrete world, and remain content with merely the structural affinities and abstract relations which are expressible in numbers and mathematical quantities. The world of physics, therefore,

that is presented to the scientist, is only the ghost, the mere skeleton. Many philosophers have, therefore, held that the scientific abstractions are mere logical creations which are almost entirely unconnected with the actual reality. I am not prepared to go so far, but I must say, that our scientific outlook of things present to us only a section of the world from a particular point of view,—particular psychological construction, a blurred lineal picture of a concrete reality which has no right to deny the experiences of other constructions. The charms of a blooming flower cannot be challenged by the physicist's definition of a flower, as being a mathematical equation of mere waves of nothing. The common notion that the physicist's work is strictly based upon observations and experience, and the fact that the hypothesis of physics can be directly proved by experiments have given it a special aristocracy such as cannot be claimed by religion or philosophy. The further fact that our knowledge of the secrets and mysteries of nature have given us the power of utilising them to our advantage and disadvantage has put a premium on scientific knowledge and made us greedy of it. The achievements of science and the successes that it has attained by rapid strides within a short period has blinded us to its limitations. In the development of physics, as it has been suggested before, mathematics plays the most important part. It is a peculiarity of mathematics that it reveals connections between things which are only perceivable to human reason but which are otherwise unobvious. It alone gives truths of a particular order without being aided by the operation of perception through the senses. In mathematics we have a universal way of abstraction. Thus the number five remains the same whether we speak of five porcupines, buffaloes or wise men of Greece. When we think of mathematics we have before our mind a science devoted to the explanation of number, quantity, geometry, order and purely logical relations. So long as one is dealing with pure mathematics one is in the realm of complete and absolute abstraction. All that can be asserted is that reason insists on the admission, that if any entities have any relations, they must satisfy such and such purely abstract conditions. When mathematics is applied to physical entities,

they must be reduced to the same type of generalities to which mathematics belongs. In the application of mathematics to physics, therefore, there is always a chance of introducing some conditions which it is natural for us to presuppose, but which need not always be there. Again, when we wish to make sure that certain relations hold within particular definite things, which obey certain definite exact abstract conditions, there is a great room for error. The exact observational methods of science are all contrivances for limiting these erroneous conclusions as to direct matters of fact. It is again always difficult to be definite that certain abstract assumptions which held in mathematics, held also with reference to certain physical appearances. It is a resolute attempt of mathematics to perform a rigid and complete analysis so as to separate the elements of mere matter of fact, from the purely abstract conditions, which they exemplify. The conditions gain their generality from the fact that they are expressible without reference to those particular relations or to those particular relata which occur in a particular occasion of experience. But though the progress of physics depends on the application of mathematical generalities by which abstract relations only can be found out, the physicist has often to take recourse to the application of mythical pictures (e.g. that inside an atom there is a nucleus round which the electrons move in their orbits) in order that he may use his constructive imagination. However, as soon as such pictures are made in the mind, the physicist inadvertently goes astray and makes himself vulnerable to criticism and runs the risk of committing an error. Thus we find that the attempts, made for the discovery of truth by physics, are largely guess-works of approximations and as such it is impossible to say with any firm certitude that any law of the physicist is ultimately and absolutely true. Thus we must realise that howsoever may be one's trust in science, it can seldom lead us to absolute certitude and even when it does, it is only with reference to abstract generalities.

That investigations of the scientists are not based merely on noting what he actually observes and on collecting only such facts as one really proves with exactitude, but that a large

amount of what we call science proceeds from the projections of the logical demand of the mind, may very well be attested by a passage from Einstein's which I take the liberty of quoting in full. "It is really our whole system of guesses which is to be either proved or disproved by experiment. No one of the assumptions can be isolated for separate testing. In the case of the planets moving around the sun it is found that the system of mechanics works splendidly. Nevertheless we can well imagine that another system, based on different assumptions, might work just as well.

Physical concepts are free creations of the human mind, and are not, however it may seem, uniquely determined by the external world. In our endeavour to understand reality we are somewhat like a man trying to understand the mechanism of a closed watch. He sees the face and the moving hands, even hears its ticking, but he has no way of opening the case. If he is ingenious he may form some picture of a mechanism which could be responsible for all the things he observes, but he may never be quite sure, his picture is the only one which could explain his observations. He will never be able to compare his picture with the real mechanism and he cannot even imagine the possibility or the meaning of such a comparison. But he certainly believes that as his knowledge increases, his picture of reality will become simpler and simpler and will explain a wider and wider range of his sensuous impressions. He may also believe in the existence of an ideal limit of knowledge and that it is approached by human mind."

Elsewhere Einstein says "The great mystery story is still unsolved. We cannot even be sure that it has a final solution. The reading (of book of nature) has already given us much; it has taught us the rudiments of the language of nature; it has enabled us to understand many of the clews, and has been a source of joy and excitement in the often-times painful advance of science. . . . . But we are still far from a complete solution, if, indeed, any such a thing exists at all. At every stage we try to find out an explanation consistent with the clews already discovered. Tentatively accepted theories have explained many of the facts, but no general solution compatible

with all known clews has yet been evolved. Very often a seemingly perfect theory has proved inadequate in the light of further reading. New facts appear, contradicting the theory or unexplained by it. The more we read, the more fully do we appreciate a perfect construction of the book, even though a complete solution seems to recede as we advance".[1]

We may illustrate this by following the fundamental line of the progress of science, in some of its aspects. Let us take the doctrine of force starting with Newton. Newton found out what may be regarded as a very simple principle, that every body preserves its state of rest or of uniform motion in a right line unless it is compelled to change that state by forces impressed thereon. But a further question arose. Now the above law of inertia which is the fundamental ground of all notions of force cannot be derived directly from experiment, but only by speculative thinking consistent with observation. We can never have that ideal condition which can produce such an experiment. Uniform motion can never be realised. We now know that our intuitive idea, that greater the action, the greater the velocity, is wrong. It does not take account of the obstacles. Thus Newton wrote "velocity once imparted to a moving body will be rigidly maintained as long as the external causes of acceleration or retardation are removed, a condition which is found only on horizontal planes." Newton's problem was not to discover the relation between force and velocity, but between force and change of velocity. Force is defined by Newton in his Principia thus: "An impressed force is an action exerted upon a body in order to change its state, either of rest or of movement, uniformly forward in a right line. The force consists in this action only and remains no longer in the body, when the action is over. For a body maintains every new state it acquires by its inertia only. Impressed forces are of different origins; as from percussion, from pressure and from centripetal force". So long as we do not consider motion along curved paths, we cannot determine laws governing such motions. The next point in regarding force and change of

[1] The Evolution of Physics.—Einstein and Infeld, pp. 3–4. (1942).

velocity and the principle, that guides it, may be simply stated as follows: force and change of velocity are vectors having the same direction.[2]

When a stone is dropped from a tower, it falls more quickly as it approaches the ground. Our common observation is satisfied with that. But the new concept of physics wanted to measure it quantitatively, how quickly does it fall at various distances from the earth. For this accurate notation mathematics has to be used as a tool of reasoning. Now in movement, where constant change of direction is involved, the movement of the earth round the sun is a typical case. This movement also involves change of velocity. We know that the force acting on the earth is directly towards the sun, but we are not satisfied to know that the earth moves round the sun. We wish to know how quickly it does and where it is at a particular instant. Newton made here an inspired guess. According to his law of gravitation the force of attraction between two bodies depends in a simple way on their distance from each other. It diminishes inversely according to the square of the distance. Thus when the distance is tripled, the pull becomes one-ninth. All other conditions being the same, the change of velocity is proportional to the force. This was also a happy guess. Newton was forced by a consideration of the nature of falling bodies to make a guess of action at a distance, which was unphilosophical and repugnant to himself and to others at the time. Newton himself thought that this must be due to some other reasons not known to us. He believed that all particular instances of falling bodies, the rotation of the moon round the earth or the earth round the sun, are special manifestations of a universal gravitational force acting between any two bodies. The attraction between any two bodies he said is proportional to their masses and inversely proportional to the square of the distance that separates them. This attractive force which operates between the centre of one body and the centre of another is universal in its application, wherever attrac-

[2] Velocity may be represented by an arrow or by a vector, whose length in some chosen scale of units is a measure of the speed, and whose direction is that of the motion.

tion between two bodies is concerned. Now this was again another happy guess and it is to be proved or disproved by observation or experiment.

Another question was introduced after a lapse of about 300 years. In the movement of bodies force is not the only thing to consider. We have also to consider the question of mass. The greater the mass, greater is the pull required to move it. The increase of mass that can be measured by the increase of force required to move it to a particular distance at a particular velocity, can be tested by weighing as well. The first may be called the mass determined by inertia or inertial mass, the second may be called mass determined by gravitational appliances, scale-pan, etc. We do not know why mass determined by these two means should be equal, or why the inertial mass should be equal to the gravitational mass. It is only accidental that they agree. Now the penetrating genius of Einstein found a new significance in the equivalence of these two masses and this led to his general theory of relativity.

If we look back upon the Galilean discovery, we know that all bodies fall in vacuum at the same rate. This means that a body with a bigger mass is given a greater pull and it is by this means alone that the inertial mass could be equal to the gravitational mass. Now Einstein found out the reason why in the case of a bigger mass there should be a bigger gravitational pull. Giving this explanation, he had to introduce an entirely new conception of space, time and matter. Einstein objected against an absolutely fixed frame of space and held that the frame of space was relative to the observer, so that distances reckoned by different observers from their points of view are not the same, but are relative to their points of view. There is no such thing as absolute distance. So a body in movement has a space-construct different from a body at rest, a fact that is responsible in the case of high velocities for the shrinkage of its length in the direction of the movement. In the formulation of this relativity theory Einstein superseded our static and box-conception of space into a changing modification, both in accordance with the perceiver's point of view and also in accordance with any mass that may be in contact with any particular

point of space. He supposed that this space at a particular point underwent a modification when in contact with a particular quantity of mass such that this modification can be reduced to a strict mathematical formula and could yield the same results as were found by the gravitational laws of Newton but in more exactitude. He also supposed that this modification took place not only in the presence of measurable mass, but also in the presence of energy including the light quanta, which were not included in Newton's gravitational law, which failed to account for the retardation of Mercury at its perihelion by 8 seconds. Einstein's prediction that the rays of light were under the same influence as a stone or a planet, was demonstrated by the fact that at the time of an eclipse the rays of the stars were found to deviate from their path when passing by the sun. Thanks to the newly discovered photo-technique that the theory of Einstein received further confirmation by the fact that even electrons were also under the influence of gravitational field. In his conception of space, he superseded our popular notion that separates time from space. He thus included time as a fourth co-ordinate in addition to the three co-ordinates of a three-dimensional space. Thus the space of Einstein was a space-time continuum in which time entered into the space as its fourth co-ordinate. Habituated as we are to perceive only the three co-ordinates, our judgments of space are naturally defective. Mathematical considerations impose a view of space on us, which includes time within it not as a mere fiction, but as a reality which though we may not be able to visualise, has revealed to us all its mathematical character.

Force in other domains of physics, involves a new concept of energy. In the consideration of heat it was proved by various experiments by Rumford and others that though the phenomenon of heat often displays a substance-like behaviour by being propagated from one end to the other of an iron bar, or by being communicated to a fluid or solid, it is not a substance. To understand it we have to introduce a new concept namely that of energy. The concept of energy cannot be defined by itself. It can be described by its effects.

Helmholtz, also, speaking of the line of the development

that science should follow, says that its vocation will be ended as soon as the reduction of natural phenomena to simple forces is complete and the proof given that this is the only reduction of which the phenomena are capable. Although these tenets reduce the description of all events to simple forces, they do leave open the question of just how the forces should depend on distance. It is possible that for different phenomena this dependence is different. The necessity of introducing many different kinds of force for different events is certainly unsatisfactory from a philosophical point of view. Nevertheless, this so-called mechanical point of view formulated by Helmholtz played an important role in its time and the kinetic theory of matter is responsible for the development of this mechanical view.

According to the kinetic theory, a gas is a congregation of an enormous number of molecules moving in all directions colliding with one another and changing the direction of motion with each collision, and the average kinetic energy of particles can be measured. More heat in a vessel means greater average of kinetic energy. Thus according to this view, heat is not a special form of energy different from a mechanical one, but is just the kinetic energy of molecules in motion. The kinetic energy of a molecule is a measure of the temperature of a gas. The kinetic theory of matter explains quantitatively as well as qualitatively the law of gases as determined by experiments. The theory, however, is not restricted to gases though it has attained the greatest success in that domain. The so-called Brownian movement, according to which the particles in liquids are always in motion, is incomprehensible without the kinetic theory of matter. Granules when suspended in water are in a state of unceasing agitation and this is visible through ultra-microscope. Through laborious research, both theoretical and experimental, the quantitative features of the kinetic theory have been discovered, particularly by the phenomena of Brownian movement. If it is asked how many particles there are in one gram of hydrogen, the theory enables us to answer this question through certain measurements of the Brownian motion of the suspended particles. The number of molecules

in one gram of hydrogen is 303 with 21 zeroes added to it. We can also calculate the mass of one such hydrogen molecule by dividing one by the number quoted above. Einstein thus believes that, in mechanics, the future path of a moving body can be predicted and its past disclosed, if its present condition and the forces acting upon it are known; thus for example, the future paths of all planets can be foreseen. The active forces are Newton's gravitational forces, depending on the distance alone. The results of classical mechanics suggest that the mechanical view can be consistently applied to all branches of physics and that all phenomena can be explained by the action of forces, representing either attraction or repulsion, depending only upon distance and acting upon unchangeable particles. In the kinetic theory of matter we see how this view arising from mechanical problems, embraces the phenomena of heat and how it leads to a successful picture of the structure of matter.

But new facts began to be disclosed, with the progress of electrical and magnetic experiments, which modified the mechanical view to a large extent and paved the way for our entry into a deeper strata of the mystery of universe.

Suppose we have a voltaic battery and a conducting wire. Now if the wire, bent in the form of a circle is connected between the two poles of the battery, with a magnetic needle at its centre, and in the same plane with the wire, the needle turns from its position. This can only be due to the effect of a force perpendicular to the plane, acting on the magnetic poles. There are several interesting features of this simple experiment. Firstly, it shows a relation between two apparently quite different phenomena, magnetism and electric current. Again, the force between the magnetic poles and the small portions of the wire through which the current flows, cannot lie along the lines connecting the wire and the needle. The force is perpendicular to these lines; for the first time there appears a force quite different from that to which, according to our mechanical point of view, we could reduce all forces of nature.

Again, according to Rowland's experiment, we know that if within a charged sphere a magnetic needle is placed and the sphere is made to move faster and faster, the force acting on

the needle varies directly as the velocity of the sphere. Now this was a new phenomenon, for the old mechanical view held that all phenomena can be explained in terms of forces depending only on the distance and not the velocity.

Again, Galileo formulated the problem of determining the velocity of light, but he did not solve it. About 250 years ago Fizeau measured the velocity of light by simple experiments. Roemer had determined it by astronomical observations even earlier, and in recent times it was done by Michelson. This velocity in vacuo is approximately 186,000 miles per second. Newton held that light consisted of small corpuscles, travelling at the rate of 186,000 miles per second. In the Bible we read a story that God made his covenant with Moses and made his signature in a rainbow. But it does not explain why the rainbows occur so often and particularly in connection with rain. Newton explained it by holding that the white light of the sun was due to the admixture of blending of 7 different kinds of corpuscles, and that these could be separated by passing the white light through a prism. This differentiation of light is called the spectrum. Huygens, a contemporary of Newton, held that light propagated in the form of waves. According to him, light-wave signified a transference of energy and not of substance. Most of the phenomena of light could be explained by either of the theories. But there are certain phenomena, such as interference of light, which can be explained only by the wave theory and not by the corpuscular. The bending of light around small obstacles and the explanation of refraction are the strongest arguments in its favour. Experiments have also now proved that the light waves are transverse and not longitudinal, i.e., they are different from the sound waves. We thus find that there are great difficulties in the application of the mechanical view, in electrical and optical phenomena. In optics, one has to decide in the favour of the wave theory against the corpuscular. There is no hope of reducing the optical phenomena to mechanical ones, before one can determine the nature of the medium and bring it under a mechanical concept. Thus the mechanical view has at last to be abandoned.

During the second half of the 19th century, the results of

the work of Faraday, Maxwell and Hertz introduced entirely new concepts and formed a new picture of reality.

One of the most prominent and most important of these concepts is, we may assume for a moment, that the field is that which characterises all actions, determined by its source, in a unique way. It would mean that if a solenoid and a bar magnet have the same field, then all their influences must also be the same, so that the solenoid behaves as a bar magnet, and a bar-magnet as a solenoid, and that they have the same properties. The explanation of a force acting between a wire, through which a current flows, and a magnetic pole, is very complicated, and we cannot get at the facts and experiments without the concept of a field theory. The field proved to be a very helpful concept. The field was something placed between the source and the magnetic needle to describe the action of force. It was thought of as an agent of the current through which all actions of the current were performed, but the agent also acted as an interpreter which translates the laws into a simple, clear language easily understood. A field may be regarded as something always associated with current. It is existent even in the absence of a magnetic pole. Now we see that the motion of the charge, as in the case of the moving charged sphere, produces a change of an electric field and this again produces a magnetic field. The change of an electric field produced by the motion of a charge is always accompanied by magnetic field. As long as the charge is at rest, there is produced an electro-static field, but a magnetic field appears as soon as the charge begins to move. Moreover the magnetic field produced by the motion of the charge will be stronger if the charge is greater and it moves faster, i.e., the faster the electric field changes, the stronger the accompanying magnetic field becomes. The quantitative mathematical description of the laws of the field is summed up in what are called Maxwell's equations. The formulation of these equations is a most important event in physics since Newton's time. They form a pattern for a new type of law.

The electro-magnetic field, according to Maxwell, is something real. The electric field is produced by a changing mag-

netic field quite independently, whether or not there is a wire to test its existence; and a magnetic field is also produced by changing an electric field whether or not there is a magnetic field to test its existence. The electro-magnetic field, once created, exists, acts and changes according to Maxwell's laws: and his equations describe the structure of the field. All space is the scene of these laws and not of mechanical laws, and it shows the points in which matter or charges are present. By knowing the position and velocity of a particle at a particular instant, and by knowing the acting forces, the whole future path of the particle can be foreseen. Maxwell's equations enable us to follow the history of the field just as the mechanical equations enabled us to follow the history of the mechanical particle. In gravitation there are material bodies acting upon one another, whatever may be the distance. But the equations of Maxwell express the laws governing the electro-magnetic field Whereas in Newton's theory we are supposed to know the effect of a body here on a body there, in the electro-magnetic theory we have the changes in the field at near distances, and then by summing them up get the final result. An electro-magnetic wave spreads with a certain velocity in space and changes in time, and the equations determine the structure of the electro-magnetic field at a particular time at a particular point in space. Its velocity is equal to the velocity of light.

It has now been discovered that the light waves are also electro-magnetic waves. In the beginning, when the field concept was first introduced, it was no more than a means of facilitating the understanding of electro-magnetic phenomena from the mechanical point of view. It is now the description of the field between the two charges and not the charges themselves. The concept of substance becomes overshadowed. The electro-magnetic field is now with a physicist as real as the table on which he writes. The scientist now believes that it is the space which has the physical property of transmitting electro-magnetic waves.

We have so far traced the development of the concept of force and have found that, though the classical mechanical conception may still be useful in the understanding of certain

phenomena, they certainly do not represent to us the final ultimate truth about the nature of force. From the acting of force of one body upon another, we have come to the conception that force involves, or rather may be equated with, certain changes or modifications in the nature of space, certain changes in the character of space which may be transmitted from one region to another. The purely qualitiless, ubiquitious and characterless space, as mere vacuity, has revealed its nature as an element possessing definite characters, and expressible only by mathematical equations. We now turn our attention to the concept of matter. Let us pass over the mere commonplace physical concept of matter. We know that the ultimate particles of matter, supposed to be indivisible, are atoms. The weights of the atoms of the different elements have been determined; they have been divided into various periods, by Mendeléeff who formed the periodic law in 1870, in which he stated that the chemical properties of particular groups resemble each other. It is also well known that the atomic number of the elements represents the positive charge of the protons inside the nucleus of the atom, to balance which there are electrons that follow the elliptical paths round the nucleus and are negatively charged. Aston has also brought in the concept of isotope where the atomic weight seems not to be a whole number—this being a mixture of two different isotopes of an element each of which has a whole number for its atomic weight. This is what we should expect if the nuclei of the heavier atoms are composed of the nuclei of the hydrogen atoms together with electrons which are very much lighter than hydrogen nuclei. The chemical properties of the various atoms are generally determined by the operations of the outer ring of the atoms. The periodic law had first suggested that the different elements must be related in some way or other. The electrons are supposed to travel sometimes with 99% of the velocity of light. Electrons are all of the same size. The nuclei, on the contrary, are different for different kinds of elements and are charged positively. The hydrogen nucleus is 1840 times as heavy as an electron. When positive and negative electricity are present in equal amounts in a body, they neutralise each other and

the atom remains unelectrified. An unelectrified atom of hydrogen, contains one proton with one unit of positive charge and one electron with one unit of negative charge. If it loses one electron it becomes positively charged. When the hydrogen atom is unelectrified the electrons simply continue to go round and round it. The electrons may move in any of a certain set of orbits, some larger and some smaller, some elliptical and some circular. But when the atom is undisturbed it has preference for the smallest of the circular orbits in which the distance between the nucleus and the electron is about one half of a hundred millionth of a centimetre. The electron can cover 1400 miles in every second. As we pass up the periodic series from hydrogen to uranium, the positive charge of electricity in the nucleus increases by one unit as is indicated by the atomic number. Thus the atomic number of hydrogen is 1, of potassium 19, of copper 29, and of uranium 92, which indicates that they have the corresponding amounts of positive charges in their nuclei. Bohr thought that the electrons are arranged in concentric rings, the inner rings containing less electrons than the outer ones. These electrons are supposed to revolve round the nucleus. The first period contains two elements, the second period, with neon at the end having the atomic number 10, contains eight elements, the third period, with argon at the end having the atomic number 18, contains eight elements. The idea is that each element contains as many electrons as is indicated by the atomic number. There is a tendency for atoms to combine chemically so as to make up the full number of electrons in the outer ring. Thus an alkali which has one electron in the outer ring will readily combine with an element that comes just before an inert gas and so has one less electron in the outer ring than it can hold. Thus the chemical combination and chemical affinity of elements is determined by the number of electrons in the outer ring.

When light from an incandescent element is analysed by means of a spectroscope, it is found to break up into discrete lines of different colours, each line having a definite wave-length and energy-content. According to the electro-dynamic theory an atom left to itself would radiate energy into the space and

therefore an electron revolving round the proton is likely to come nearer and nearer the proton and revolve in smaller and smaller circles. According to the Newtonian theory, the approach towards the nucleus should be continuous with the loss of energy. But as a matter of fact the electron only chooses circles at particular distances as if it goes from one to another by jump, without passing through the intermediate space. This is due to the fact that Planck had discovered that the loss of energy can only happen in certain definite parcels and not by fractions of these parcels, or in other words, loss or gain of energy cannot be continuous. It is always discontinuous and always an exact multiple of a universal constant, known as Planck's constant. This is called the quantum theory. With the introduction of this quantum theory, we have in physics a new element called the physics of the discontinuous. Bohr's atomic model based on Mendeléeff's theory of the periodic system and the spectra of the atoms is only a provisional picture of what happens inside the atom. It can give us no satisfactory reply as to how the electrons behave within the atom. Bohr himself says that we have to face the fundamental failure of the spatial and temporal picture by means of which we have hitherto attempted to describe natural phenomena. He, therefore, advises us to abandon mechanical pictures in space and time. These ideas of Bohr were followed by Heisenberg. The orbits of the electrons, their momentary positions, their times of revolution are all magnitudes that we cannot even deduce indirectly from the data of spectroscopy. This mixture of classical physics and quantum theory makes far too many unprovable statements about the processes going on in the atom. We must be able to give with mathematical exactness the interpretation of our spectroscopic observation. We may not be able to form a picture of the inner workings, but still we may have a correct mathematical idea. Heisenberg therefore, urges that we should not construct any theory except on the basis of what is actually observed. In the spectroscope we can observe only the changes of energy levels and nothing more. The states of an atom, therefore, can no longer be described in terms of the unobservable position and impulse of its electrons, but only of the

measurable frequency and intensity of the spectral lines.

Apart from the mathematical approach, the most important and the most fertile idea for the understanding of atomic processes by classical concepts, is the idea of wave particles or matter-waves as formulated by De Broglie as early as 1925, and developed by Schrödinger into his wave mechanics. All matter consists of minute corpuscles. They possess energy and impulse. There is no experiment that can tell us at what point on its journey round the atom the electron is to be found at any moment. It appears as though it might be spread over the whole orbit. We should, in our new conception, cease to think of matter as being made of corpuscles, and consider them to be made of waves. Instead of an electrical matter moving round the atom, we have a system of waves.

The daring hypothesis for explaining Bohr's quantum postulates, and to solve the riddle of the atom by regarding the electrical matter moving inside the atom as a system of waves, is due to the efforts of De Broglie and Schrödinger. The electron is not to be imagined as a corpuscle travelling round a circle or ellipse, but as a wave permanently occupying a whole circle, and there is no point in enquiring as to its position in the circle, since all the time it is everywhere at the circumference. This electron has a definite wave length, with the result that it can only fit in certain circles.

We do not yet know what it is that vibrates in the waves; but this vibrating something is limited to quite definite states of vibration in space, with a definite distribution of nodal surfaces. But one thing is certain that the vibration does not belong to any matter. "Schrödinger assumes that the waves measure by their strength the density of the electric charge possessed by the matter, the electron. This charge is therefore no longer to be imagined as concentrated in the body of the electron, but rather as distributed over the whole wave structure, which is extended without limit, but falls off rapidly as we go from the electron, like the sand on the vibrating plate. The stronger the vibration at any point the denser is the electric charge there".[1] The dis-

[1] Zimmer. The Revolution in Physics, p. 152.

continuous behaviour of the electrons becomes quite comprehensible from the wave theory. But we must speak of another mysterious phenomenon about the matter waves. Schrödinger's calculation shows that on the one hand the hydrogen atom with its single electron is to be regarded as a wave in our familiar space of three dimensions, but if we are dealing with an atom, possessing two electrons, calculations show that the corresponding matter waves exists in 2 x 3 dimensions, i.e., 6 dimensions of space. Space of this kind cannot be imagined concretely, and it is not our own familiar space, but it is possible to calculate with 6 dimensions just as well as with 3, and when we have atoms possessing 3 and more electrons we have to calculate with 9 and more dimensions. Schrodinger's waves are not to be imagined as existing in our ordinary space, excepting the case of atoms with single electrons. These waves, therefore, are vibrating in space of much higher dimensions than that we are familiar with. These matter waves are not something that we can perceive with our sense, but they are simply mathematical abstractions. The result is that something exists in this world which behaves as waves, or as if it were waves. It seems, therefore, that it is not possible that the appearance of the world in which we live can ever be assimilated with its under structure, which is likely to remain always behind the appearance and about which we can only form some notions by mathematical abstractions. Dr. Zimmer says "We have therefore certainly not yet discovered the whole truth, perhaps not even the most important point; but we shall never discover *the* truth. We never come upon it all at once. We pass on from error to error and are delighted when the new error is less than the previous error and we feel that we are gradually approaching the truth, although the road is endless.[1] . . . . ." Our physicists cannot deny metaphysics altogether in the direction of the world of things in themselves, which we believe to lie behind the world of experience, though it be for ever a sealed book to us.

But our difficulties do not end here. As in the case of light, both the corpuscular and undulatory theory are suitable in the

[2] Zimmer: The Revolution in Physics, p. 162.

interpretation of different classes of phenomena, so the electronic theory of bodies or entities and the theory of wave mechanics are both applicable to different classes of phenomena. How can the two be reconciled? Max Born proposed a new hypothesis to explain the double nature of radiation and matter. In the wave-theory, the height of the wave crest represents its brightness. But if light consists of corpuscles, virtually called photons, greater brightness can be equated with larger number of photons. If both photons and waves exist, then at the height of the crest there should also be the maximum number of photons. When light waves strike a screen, a number of waves will strengthen one another at many points by interference, and there we have high wave crests and therefore, numerous photons must be arriving there and the screen at this point will be brilliantly illuminated. At other points light waves extinguish one another and we do not expect any photon there, and on such points there is darkness on the screen. No photon has been destroyed, but the probability of any photon arriving there is very small. The wave crest indicates the statistical average value of the probable number of photons arriving. What travels outwards in waves is the probability of the photon arrival. The fate of a single photon on its journey or its path remains quite undetermined; such paths do not exist. The motion is given by waves and these determine the average number of photons which arrive at any point. We can only make statistical statements concerning photons.

The same hypothesis we may apply to matter. The matter wave measures by the height of its crest the probability of the arrival of the particles; though the waves are again probability waves and the motion of individual particles remains quite undetermined. The theory tells us nothing as to how the position and velocity of a particle change, and it also does not reveal why we are unable to determine them. Whether the cause of our ignorance is insufficient knowledge or fundamental impossibility of the situation, has to be found out.

We know that the waves which measure "probability distribution" of the electrons can also be given more than three dimensions in space; for they are waves of a formal mathematical

character. The freely moving electron that is not subjected to any force possesses a matter wave spread out over the whole of space. This, of course, does not mean that a single electron spreads over all space. The statements concerning motion, being of a statistical nature, deal only with the behaviour of a large number of electrons. The theory, therefore, may indicate that whenever a large number of electrons move about freely, the probability of discovering any one of them is same all over the space. In the case of stationary waves the loops are the densest points of the average distribution of the electrons. Born's hypothesis gives us a remarkable reconciliation of the wave and the corpuscular theory. The waves behave as if they were corpuscles whenever we are concerned with an exchange of energy and impulse. But still they cannot be considered as corpuscles, for if they were so, they would be at a definite position in a definite path along which they move. But this cannot be ascribed to them, for their average motion in space and time is such as if they were waves. In our ordinary world we can distinguish between a wave and a body. But we cannot do so in the case of electrons and protons. They must have to be both. Planck's constant h is the transitional magnitude marking the change from the corpuscular view to the wave. A moving electron has a definite energy and a definite impulse. But its position is represented by a wave filling all space with a certain frequency and wave length. The exact knowledge of the values of the energy and impulse of an electron implies complete uncertainty regarding its location point at any given time. According to Zimmer, only when we cause several waves, differing in wave lengths over a certain range, to overlap, do we get a wave possessing perceptible height in a region of space and disappearing in the whole of the rest of space. Only such overlapping of several waves of different wave lengths produce a wave packet. These are waves concentrated in space which travel forward together as long as they hold together and behave, therefore, like a particle.

I need not go into more details or into the mathematical arguments in its justification, for we are interested here mainly with the results. We know now that if the position is known

at which a flying particle was present, within the limits of a small distance in a horizontal direction, then the impulse is uncertain within certain limits of error. The more accurately we state the impulse of the body, the greater will be the error in determining its position and the less exactly will its position be known and vice versa. This fact does not appear in ordinary physics on account of the smallness of Planck's constant. Classical physics was wrong in believing that bodies existed, to which it was possible to ascribe definite impulse and velocity and definite value of energy, without, at the same time, their position and the duration while being observed, being known. This is not true in small dimensions. On the contrary all the quantities named are always known inaccurately. Increase of accuracy in one direction causes decreases of accuracy in the other.

"This uncertainty principle was put forward by Heisenberg in 1927 and it was also recognised as the foundation of quantum theory."[1] Both light and matter have a double nature. We now know further that the ordinary concepts of physics are not applicable in the domain of the subtle. Measurements made on single electrons are fundamentally and inevitably inaccurate. Statements can only be made in a statistical manner. The uncertainty relations depend, as we have seen, upon the dual nature of light and matter.[2] The difficulty is such that no perfecting of instrumental apparatus be ever able to surmount it. The means of measurement, as in the case of gamma ray microscope, influences the electron, position and velocity which is to be measured by striking it and this influence can itself be determined inaccurately, since the track of the scattered photon cannot be determined exactly. The case is analogous to where an angry psychologist wishes to study introspectively the state of his anger.

Eddington, on the basis of scientific discoveries, raises an important question for our consideration. First of all, if all energy contacts can only be through the constants of Planck, there is no chance of our unravelling the mystery that underlies the formation of this energy atom, and the nature of the cause

[1] Zimmer: Revolution in Physics, p. 173
[2] Ibid p 176.

that gives a quantic expression to all our experiences and phenomena. We lose the aspect of continuity with the world. We live from moment to moment and we do not know anything about what happens in the interval. Again, in the principle of indeterminacy, we find that when we survey the sub-microscopic world, which must be regarded as the basic structure of all that is perceivable to the senses, a great contradiction in our experience in the two worlds is noticed. If we look at the moon on a full-moon night after dinner and then go to bed, and again rise in the night several hours after and see the moon in another position, we seriously believe that the moon had been persisting in a continuous travel over a particular path; but our army of scientific watches assure us that this cannot be so about the ultimate particle of matter, the electrons. They may now be here and then vanish and then rise up at another place. If we know more accurately about the velocity of an electron we know less accurately about its position. It shows itself as an electron and vanishes in the wave, then it again emerges from the wave at a position where we could not expect it to be. The nature of the world, Eddington says, which has any appeal to the physicist, is not our everyday three-dimensional world but a four-dimensional structure in which all physical quantities have different orientations according to the diversity of the points of view of the structure. The whole of the world is represented by numerical numbers having particular kinds of relations. We hold in our mind certain mathematical relations such as two and two make four, but we cannot say why it should do so. Our exterior structure of the world is made in consonance with our mental structure that thinks mathematically. The power of our building the external world depends on the selective capacity of the mind, and we can never say that the structure that we give to it, either by our mathematical abstractions or by our sensory apperception, actually belongs to it. Thus according to Eddington, a better way of expressing the selective influence of mind on the laws of nature is to say, that values are created by the mind. In this way all the light and shade in our conception of the world of physics come from the mind and cannot be explained without reference to consciousness. Moreover, the mind

has, by its selective power, fitted the processes of nature into a frame of law, of a pattern largely of its own choosing and in the discovery of this system of law, the mind may be regarded as regaining from nature that which it has put into nature. But whether the mental order will ultimately be able to assimilate in its own rational scheme all that may be experienced, is a question we cannot yet answer. We cannot also say whether or not there is an irrational element in nature, which cannot be assimilated or made consistant with the rational order of the mind, or whether, in trying to bring it within the grasp of a rational mind, we should alter it. But whatever that may be, we cannot transcend our mind; we can impose only such a structure on the external world as can be measured by it.

Physics is called an exact science, but its exactitude is not with reference to the ordinary objects of our experience. Its outlook transforms the physical world of our experience into another type of concepts, and whatever type of exactness it may have, refers only to these concepts. Thus in a mathematical question to determine the velocity of an elephant 60 tons in weight in slipping down a slope of 60 feet hill side, the importance of the elephant is reduced to zero. Our attention is drawn to the pointer reading and the weighing machine on which the elephant could be placed. Then the beauty of the hill, its emerald grass and soft verge are out of our consideration. Our attention is drawn only to the figure, '60 ft. It is the business of the physicist to connect these two numbers through other relevant quantities or numbers and arrive at a result, which is also a number, but containing nothing of the tremendous monstrosity of the tragic episode. Physics is based on a triple correspondence, (i) a mental image which is in our minds and not in the external world; (ii) some kind of counterpart in the external world which is of inscrutable nature; (iii) a set of pointer readings which exact science can study and can connect with other pointer readings. The vocabulary of the physicist is limited to few words, e.g. length, angle, velocity, force, potential current etc. which he calls physical qualities. The older conceptions are also every day taking a new shape. Thus formerly mass was defined as the quantity of matter contained in a thing.

According to this view a pound of sugar should have the same quantity of matter • as a pound of gold. But according to Einstien's new conception the mass of each substance has to be separately determined. The elephant under discussion is a four-dimensional hollow, which again is represented merely by the four co-ordinate numbers which are the only test of his identity from the time of his fall to his coming to the ground.

The recognition that our knowledge of the objects treated in physics consists solely of readings of pointers and other indicators, transforms the view of the status of physical knowledge in a fundamental way. Thus, for example, the physicist has no means of determining the existence of thought or its characteristics as distinguished from a lump of stone. How can the collection of ordinary atoms in a brain be reduced to a thinking machine. Even as atoms the physicist cannot give any ultimate account of it except some figures and equations. I know from my experience that I have a consciousness, but it is not possible to reduce it to certain mathematical readings. Whatever cannot be put in the form of a differential equation is useless for physics. Mathematics is the model of exact inference, and the arguments of mathematics are continued in a prejudged scheme of the mind. This mathematics is the principal eye of the physicist; when he fails to complete the mathematical chain he confesses that he is wandering in the dark. For this reason the physical science has evolved a conception of the world consisting of entities rigorously bound to one another by mathematical equation forming a deterministic scheme. The determinism of the physical laws reflects the determinism of the method of inference. But for all the future progress that physics might make, it would be impossible to think that it could in any way be all-comprehensive. When we take that complicated being called man, we find that when certain sound waves impinge on his ear and certain images fall on his retina, he moves and works in a particular manner, but this movement of his can never be deduced by the wave lengths of the sound or light waves. It is determined by the meaning that those sound waves carry to him, which is of an entirely different order and

can never be brought within the deductive or inductive limit of physics.

When we speak of the external world as real, what we mean is that all the different perspectives of different observers find their common ground there. It is the symposium of the worlds presented to different view points. The scientific theories about the world are neither true nor false, but merely convenient or inconvenient. The scientific theory is intended to economise thought. When the scientist says that the external world is real, what he means is, that it is not a false concept introduced by an error in the process of synthesis or a hallucination belonging to one individual consciousness or an incomplete representation which embraces certain view points but comes in conflict with others. All definitions in science are made according to the way in which it is recognised in practice, and not according to any ulterior significance that we imagine it to possess. We are unable to find from the atoms and the electrons anything else than a conventional reality. If we are to raise the question of reality in its transcendent sense, physics is not the proper gate way. We cannot rest contented by looking at a man as being only a burden of sense impression; he is a purposive being, full of responsibilities and ideas to which the external world is subordinate. We have to recognise a spiritual world side by side with the physical. The experience that is the self, with the environment comprises much more than the metrical symbol which forms the structure of the physical world from the point of view of the physicist. We cannot deny that those who in their search for truth, start from consciousness as the seat of self-knowledge with interest and responsibilities, and are not confined to the material plane, are just as much facing the hard facts of experience as those who start from consciousness as a device for reading the indications of spectroscopes and micrometers. From the point of view of physics we can give no answer to the question whether a thing exists or not. Consider a distribution of matter in Einstien's spherical "finite and unbounded" space. When we go to the atomic physics we are told that the electrons and protons are both bodies and waves, substance or no substance.

Again, with the advent of the quantum theory, physics is

no longer pressed to a deterministic law. Thus Einstein says in his message on the Newtonian tri-Centenary that it was only in the quantum theory that Newton's differential method became inadequate and strict causality failed us. He prayed that may the spirit of Newton's method give us the power to restore unison between physical reality and the profoundest characteristic of Newton's teaching of strict causality. Modern physics is gradually drifting away from its own postulate, that the future is pre-determined, ignoring it, rather than deliberately rejecting it. With the discovery of the principle of indeterminism—its attitude has become more definitely hostile. A clear consequence of dropping causality in the external world is, that it leaves us with no clear distinction between a natural and a supernatural. Newton's demon of gravitation was supposed to act according to fixed causal laws and therefore, unlike the irresponsible demons of our modern savage times. Once a deviation from strict causality is admitted the distinction vanishes away. Eddington thus concluded that there was no strict causal behaviour anywhere.

Eddington further holds that the physicist's construction of the physical world is based upon a part of an intellectual projection that allows itself to be interpreted in terms of the matrices or the concepts of potential force and angles, curves-velocity, and the like. But these do not cover the entirety of our psychological and intellectual apparatus. In constructing the world, according to the physicist's scheme, the details of colour and form and beauty of nature are simply put aside as unimportant. We have seen, even when dealing with the physical concepts only, that we cannot get rid of inaccuracy and contradiction, and even in our slice or the partial and imperfect structure that we impose upon the physicists' world, we cannot come to satisfactory conclusion or get rid of mystical occurrences. We cannot also say, with any amount of definiteness, exactly what part of the physicist's construct is true and what part of it is illusion. If that be so, we cannot also very well ignore the major part of our psychological and logical structures that we impose unconsciously upon the world in which we feel and live. We must also distinguish between symbolic knowledge and intuitive knowledge.

The symbolic knowledge is the logic of strict analysis, the reduction into the components of a synthetic whole. Intuitive knowledge is the knowledge that comes to us directly, where all ideas of analysis and contradiction vanish in the very sweeping wave of our intimate union with the object, and all the meaning and significance would be lost if we make any attempt to analyse the situation or the materials of our immediate intuition. The force of a joke for example, is lost by any effort to analyse it into its essential ingredients and classification of different kinds of wit and humour. The real appreciation must come spontaneously and not introspectively. In the same manner the appeal of nature to a poet arises directly, and would lose all its charm, were the poet inclined to botanise over a beautiful scenery of shrubby palm trees. Our mystical experience of God also comes in the same direct manner. There are some to whom the sense of a Divine Presence irradiating the soul is one of the most obvious things of experience. In their view a man without this sense is to be regarded as we regard a man without a sense of humour or without a poetic appeal. The attempt to theologise over God and to apply logical concepts and rational thinking, demanding proofs of His existence and His relation with man, would be an analytic attempt which would destroy the very presence of God within us; such philosophising is similar to 'physicising' over the nature of God. As a scientific exposition of the structure of a joke cannot induce laughter, so a philosophic discussion of the attributes of God cannot awaken a deep response of the spirit which is the most intimate feature of religion.

In dealing with religion we have to deal with that aspect of our being which is not amenable to metrical speculation. Our mind, in consonance with our sense organs, must weave images and illusions about this aspect to make our social and national life, our heroic sacrifices and patriotic offerings, possible. If a man has to be initiated into the greater revelations of the inmost being, he must not feel shy of awakening his image-building power related to the higher faculties of his nature, so that all the eyes of the soul may open their flood gates of light for the vision of a spiritual world, which may partly be immersed in illusion, but which is undoubtedly founded upon

a bed-rock underneath the torrents of joy and delight. The mystic, in his defence, might say—"The familiar material world of everyday conception, though lacking somewhat in scientific truth, is good enough to live in; in fact the scientific world of pointer readings would be impossible sort of place to inhabit. It is a symbolic world and the only thing that could live comfortably in it, would be a *symbol.* But I am not a symbol; I am compounded of that mental activity which is from your point of view a nest of illusion, so that to accord with my own nature I am to transform even the world explored by my senses. But I am not merely made of senses; the rest of my nature has to live and grow. I have to render account of that environment into which it has its outlet. My conception of my spiritual environment is not to be compared with your scientific world of pointer readings; it is an every-day world to be compared with the material world of familiar experience. I claim it as no more real and no less real than that. Primarily it is not a world to be analysed, but a world to be lived in".[1]

But the materialist whose heart has been deadened, who seeks a natural explanation of material powers, may still say "Very well. Have it your own way. It is a harmless sort of a belief not like a more dogmatic theology. You want a sort of spiritual playground for those queer tendencies in man's nature, which sometimes take possession of him. Run away and play then; but do not bother the serious people who are making the world go round."[2] He believes, like Marx, in the dialectic of material or economic forces, and thinks that the history of man has evolved out of it. But is their contention right? Call it of the God or of the devil, call it fanaticism, unreason or hysteria, but you cannot underrate the powers of the mystic. They may be the music makers, the dreamers of dreams, wandering by lovely sea-breakers, and sitting by desolate streams; they may be world-losers and world-forsakers, yet they are the movers and shakers of the world for ever.[3]

Eddington believes that the background of reality behind

[1] Eddington: The Nature of the physical world, p. 324 (1948).
[2] Ibid p 325.
[3] Ibid p. 325–26.

the scaffolding of the matrix and of our physical concepts must be somehow continuous with the mind. There is no doubt a hiatus in reasoning which impels one to say that the way of discovery of the truth through reason has no special privilege. It is for this reason that we find that deeper the reason goes for discovering the ultimate truth in the physical world, more prominent becomes its humility, because of chasms it cannot bridge. Moreover, to construct a physical world we need have the data supplied by our senses. But it is usual for us to take the data of our senses, provided they are not singular and exceptional and are incontestable. It is on the basis of these incontestable data that all the conceptualisation of science is possible. But we have in our nature other kind of assurance in our social, moral and religious experience, which appear at least as incontestable as the data of our sense. We feel, for example, that there are many intelligent persons or selves of others with his sense-organs. We do not also perceive our own selves by any of the organs of our sense and we are often forced to admit that mind is as much a sense-organ, for the apperception of our purpose, our responsibilities, our duties, our emotions and ideas, as the sense is supposed to be, for perceiving its object. If I am in love or anger the fact is no less certain to me than the perception of a table. All our convictions arise from out of the mind, by the very forcefulness of the appearance of a particular awareness, dominated by feeling. The time and the space in which these appear are different from the time and the space in which the sensation appears. Thus the sense of a moral responsibility appears in the mind and is felt to be in a mental space, and a kind of time that is not punctuated by passing moments of discreetness. It may be said that these inner feelings, call them spiritual, moral or aesthetic, probably have their significance which is very different from that which we ascribe to them. But so are the sensations of our organs. They tell us a story which is very different from the story that is given by the adventurous researches of physics. But still we are always contented to live in the world that we weave out of our sense impressions. So if the spiritual world has been transmuted by religious colour, beyond anything implied by its bare external qualities, it may

be allowed to assert with equal conviction that this is not misrepresentation, but the achievement of a divine element in man's nature. A psychologist may explain, with a study of abnormal psychology, a particular religious experience to be due to a special kind of psychological temperament, and try to explain away the reality and value of a particular religious experience. Similarly a Scotchman with a leaning in philosophy may analyse a particular after-dinner joke and show that the joke itself was not good enough to produce such a hilarious laughter, but that it was due largely to the effects of a Havana-cigar and a hearty well-cooked meal; but all this would be quite beside the point, for whatever may be the reason, the appeal of the joke was true as it produced the laughter. It is as impossible to induce a religious experience into an atheist or a moral materialist as to induce a feeling of humour into a non-humourous person. The Scotchman may be advised to associate with merry people and thus improve his power of appreciating humour, the moral materialist or atheist may be asked to associate with religious people. Perhaps in the recesses of his mind there exists a faculty which may be roused by such associations.

But the rationalist may still demand proofs. Proof is the idol of worship for the pure mathematician. The physicist with greater wisdom has given up his demand for proof and he is content with probability and plausibility. The physicist has sometimes convictions which he cannot prove; the level of proof is different from the level of conviction. So men may have religious conviction, which they may not prove, but which may be true for them all the same. The world proceeds very much more by probabilities and plausibilities than by proof. Even a logical induction is no better than a preponderance of probability. The Jurist, the medical man, the politician, the administrator and the teacher all proceed by notions of probability and plausibility and it is seldom that they demand proof or achieve it. Thus also spiritual world is built up by experiences torn from our own personality and it has an assurance of one's own personality.

It is often said that the most dogmatic part of religion is

faith. Faith means a belief which has insufficient rational grounds. The truths of religion cannot be rationally proved, and they require faith both for their comprehension and for the continued active endeavour by which alone religious truths can be realised in life. Science is a world where we employ only reason and observation and which does not require any contribution from faith for its development. To this Einstein says, 'The reality created by modern physics is indeed far removed from the reality of the early days......Is light a wave or a shower of photons? Is a beam of electrons a shower of elementary particles or a wave? These fundamental questions are forced upon physics by experiment. In seeking to answer them we have to abandon the description of atomic events as happenings in space and time, we have to recede still further from the old mechanical view. Quantum physics formulates laws governing crowds but not individuals. Not properties but probabilities are described, not laws disclosing the future of systems are formulated, but laws governing the changes in term of the probabilities and relating to great congregations of individuals'. We want the observed facts to follow logically from our concept of reality. Without the belief that it is possible to grasp the reality with our theoretical construction, without a conviction in the inner harmony of our world, there could be no science. This belief is and always will remain the fundamental motive for all scientific creation. Throughout all our efforts in every struggle between old and new views we recognise the eternal longing for understanding, the firm belief in the harmony of our worlds continually strengthened by the increasing obstacle to comprehension.

'Planck also says in the same vein that the guiding principle of science is faith—a faith which looks ahead. It is wrong to suppose that science has no preconceived notions. It is erroneously supposed sometimes that science proceeds solely on an empirical foundation. The empirical data, however, are merely materials which must be ordered by association of ideas, and this is not a work of understanding, but an offspring of the investigator's imagination, an activity which may be described as faith. The chaos of individual masses cannot be wrought

into a cosmos without some harmonizing force and the disjointed data of experience can never furnish a veritable science without the intelligent interference of a spirit actuated by faith. Kepler was much oppressed by poverty, but what supported him in his life and his scientific venture was his belief in the rule of rational laws in the universe as contrasted with Tycho Brahe. Tycho Brahe had no such faith in the immutability of the eternal laws, and thus remained only a meritorious investigator, while Kepler became the founder of modern Astronomy. So Robert Mayer also remained undismayed by the cold reception that he got from the people and found consolation not so much in his knowledge as in his faith. In these and in very many others we find that an active faith at work was the power which gave a real effectiveness to the work of its votaries. Faith points the way and sharpens the senses. Faith in the rational ordering of the world is the only spiritual means at the disposal of the scientist.

Russell, who is more atheistically bent, and does not approve of the compromise that Jeans and Eddington wanted to have with religion, follows Planck when he says, "Science is in its essence nothing, but the systematic pursuit of knowledge, which, whatever ill uses men may make of it, is in its essence, good. To lose faith in knowledge is to lose faith in the best of man's capacities; and therefore I repeat unhesitatingly that the unyielding rationalist has a better faith and a more unbounded optimism than any of the timid seekers after the childish comforts of a less adult age". We find here, as well as in Planck, that faith and optimism hold the pursuit of knowledge with perseverance. For there is nothing holier than knowledge as Indian scriptures assert, and it is by such an untainted faith alone that we can hope to advance slowly towards what reason may ultimately give us. But here also, if faith and optimism guide reason to its higher goal, they themselves are not included within rationalistic knowledge. They are spiritual or moral elements without which knowledge would itself be lame. Our point of view is not that we are disappointed in science and that we are clinging to religion as the last resort. But what I hold is, that our spiritual, moral or religious experiences are

free as far as the genuine experiences go, and work their way for a higher development and also for the development of science. Our spiritual and mathematical instincts refer to two diverse aspects of truth and, though they may have an inner unity in our personality, they lead to two different kinds of experience.

When man was born with the power of thought and the knowledge of good and evil, he realised the fierceness of death. He interpreted that death must have a hidden purpose behind it, and he thought that the mystery lay with the power beyond. He thought that all his misfortunes were due to his disobedience to God, and in his own optimism believed that God would forgive him if he remained loyal to Him. If this attitude is void of any meaning, more purposeless and more void of meaning is the world that science presents for our belief. Russell says, in his Mysticism and Logic, "That man is the product of causes which had no provision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves and his beliefs, are but the outcome of accidental collocation of atoms; that no fire, no heroism, no intensity of thought and feeling, can preserve an individual life beyond the grave;....Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul's habitation henceforth be safely built."[1] "In spite of Death, the mark and seal of parental control, Man is yet free, during his brief years, to examine, to criticise, to know, and in imagination to create. To him alone, in the world with which he is acquainted, this freedom belongs; and in this lies his superiority to the resistless forces that control his outward life".[2]

The savage has to create his God after his own pattern, but as civilization advances, the claims of the ideal world begins to be felt. In God's answer to Job, God speaks of his mighty power and knowledge. But power alone does not satisfy man and make God worthy of worship. He must be, above all, good, to deserve the worship of a moral man. In the idea of the Prometheus we have the ideal of a man resisting power, but in the idea of Christ we have a still greater ideal fulfilled in the con-

[1] Bertrand Russell: Mysticism and Logic p. 47-48 (1932).
[2] Ibid p 48

ception of renunciation and resignation. Russell believes that, "For the young, there is nothing unattainable; a good thing desired with the whole force of a passionate will, and yet impossible, is to them not credible. Yet, by death, by illness, by poverty, or by the voice of duty, we must learn, each one of us, that the world was not made for us, and that, however beautiful may be the things we crave, Fate may nevertheless forbid them. It is the part of courage, when misfortune comes, to bear without repining the ruin of our hopes, to turn away our thoughts from vain regrets."[1] But it is not only by such a passive resignation that we prove to us our manhood, but by dedicating us to the realm of poetry or music or art that we can reap the full benefits of our nature. Russell further says, "Except for those rare spirits that are born without sin, there is a cavern of darkness to be traversed before that temple can be entered. The gate of the cavern is despair, and its floor is paved with the gravestones of abandoned hopes. There Self must die; there the eagerness, the greed of untamed desire must be slain, for only so can the soul be freed from the empire of Fate. But out of the cavern, the Gate of Renunciation leads again to the daylight of wisdom, by whose radiance a new insight, a new joy, a new tenderness, shine forth to gladden the pilgrim's heart".[2] "United with his fellow-men by the strongest of all ties, the tie of a common doom, the free man finds that a new vision is with him always, shedding over every daily task the light of love"[3] to push forward with courage amidst dreary desolateness of misery and grief, immolating our desires on the path and radiating sunshine on our fellow beings, the free man slowly marches towards his goal. Disdaining the coward terrors of the slave of Fate, proudly defiant of the irresistible forces that surround him, weary but unyielding to attach himself to the world that his own ideals has fashioned is the goal of a freeman.

Whitehead, one of the keenest of mathematicians of the day and a sound philosopher, says, that in every metaphysical situation we require a principle of limitation, a question as to

[1] Bertrand Russell. Mysticism and Logic p 52.
[2] Ibid pp 52-53.
[3] Ibid p. 56.

how and why. As this ultimate how and the why cannot be answered, we have to deny the reality of the actual occasion; the apparent irrational limitation must be regarded as a proof of the illusion and we must look for reality behind the scene. If we reject this alternative behind the scene, we must provide a ground for limitations which explains the attributes of substantial activity. However long may be the chain of causes and effects, no ultimate reason can be given. It has to be assumed that all reasons flow from behind, and if this is God, He becomes the ultimate limitation and His existence is ultimate irrationality, for no reason can be given for that limitation which is in His nature to impose. God is not concrete, He is the ground for actuality. No reason can be given for the nature of God, for that nature is the ground of rationality. We cannot give any metaphysical reason for this categorical limitation. What further can be known about God must be sought in the region of particular experience, and this knowledge rests on an empirical basis. Mankind has differed profoundly regarding those experiences and their interpretation, and God has been called by various names. Each name and the system of belief associated with it is the outcome of a particular system of experiences and their interpretations. Among mediaeval and modern philosophers anxious to establish the religious significance of God, an unfortunate habit of paying to Him a metaphysical compliment has prevailed. He has been conceived as the foundation of the metaphysical situation with its ultimate activity. If this conception is admitted, God should be the origin of all evil and good, and all the defects and success of the universe as His handicraft would be described to Him. But if He be conceived as the supreme ground for limitation, it stands in His nature to divide the good from the evil and to establish reason within His supreme dominion.

Controversalists have often urged the view that during the last half century science and religion have come to a position of open hostility. Both religion and science have sprung from permanent elements in human nature; and if these two be in conflict, we shall have to plant the seeds of misery and discord into the very nature of our personality. Theologians at different

times have announced different views about the world, which have been disproved by science. But if religion has been deceptive in all these, so has been science, if we pursue its history from the time of Galileo.

According to Whitehead the same principle, namely, the solid reason, which we apply to science, may also be applied to religion. If the clues are not available we should wait for opportunities to come. If there has been a clash between the two departments of human experience, we have reasons to hope that the so-called clash is due only to wrong perspectives and that a careful and diligent approach will ultimately remove the misapprehension. We believe in the unity of the world and the unity and orderliness of our own personality. Both science and religion are derived from sense data and images to which the concepts of mind have been applied. Whenever in the past clashes have appeared between two rival theories, they had disappeared under the illumination of a newer and deeper perspective. Thus in Physics two contradictory theories of corpuscular change and of waves were formulated by Newton and Huygens in the 18th century. People believed in Newton; in the 19th century they believed in Huygens. To-day there is one large group of phenomena which can be explained only by the wave theory, and there is another large group of phenomena which can be explained by the corpuscular theory. Scientists have to leave it at that and wait for the future and we have already our hopes in Schrödinger's wave mechanics theory to explain the situation. Science is concerned with the general conditions which are observed to regulate physical phenomena; whereas religion is wrapped up in the contemplations of moral, spiritual and aesthetic values. On the one side there is the law of gravitation and, on the other, the contemplation of beauty and happiness. What one side sees, the other misses and vice versa. If we take up the life of John Wesley and of St. Francis of Assisi from the point of view of physical science we find that their lives are but ordinary examples of physiological chemistry and the dynamic of nervous reactions. But from the religious point of view these lives are of profoundest significance in the history of the world. But no account of these lives would be

worth its name if the religious perspective is dropped.

On the whole, during the past generations, there has been a gradual decay of religious influence on European civilisation. For over two centuries religion has been on the defence and a weak defence. The period has been one of unprecedented progress and a series of novel situations has been produced for thought. Each such occasion has found the religious thinker unprepared. Something which has been proclaimed to be vital has finally, after struggle, distress and anathema, been modified and otherwise interpreted. The later generation of religious Apologists, then, congratulated the religious world on deeper insight which had been gained. Continued repetition of this undignified retreat has gone on at the risk of considerable loss of prestige on the part of religious thinkers. But in the field of science, if Einstein has upset Newton's theories, it is not regarded as the defeat of Newton or science but as the victory of science. Religion can never gain its hold over people unless it can face the change of outlook with as much equanimity as science does. The fact of the evolution or the revolution as the disengagement of its ideas from the adventitious and the inessential has to be admitted as progress of religion and not decay. A new statement of scientific discovery must necessarily involve a change of outlook which may be expected to have some bearing on the religious notions also. So far as a religion has any contact with physical facts, it is to be expected that the point of view of those facts must be continuously modified as scientific knowledge advances. The more such a disengagement occurs, the cleaner becomes the message of religion. Thus in the mediaeval times heaven was in the sky and hell was under ground. Whatever may be the actual condition of the future state, the clash between religion and science is obvious. Science has relegated the earth to the position of a second-rate planet attached to a second-rate sun. We may regard it not as detrimental to religion, but as an embellishment of it. It dissociates religion from obvious mythical fancies which do not form the essence of religion. Many of the crude religious doctrines do not stand the test of logical criticism far less of any scientific inquiry. It is judicious for religious thinkers to go deeper into the essence of religious

thought and weed out the unnecessary dogmas, which had an appeal in the days of Augustine, but which cannot have an appeal in the days of Einstein and Hiesenberg. The main point to be noticed here is that religion is the expression of a particular type of fundamental experience of mankind, and that religious thought attains a more living and an accurate expression when it is disengaged from adventitious imaginings, which might have been of some force in earlier times, but which can have no significance for the rationally bent mind of the twentieth century. All attempts of the priests to rouse the wrath of a tyrant God in order to force men to religion, must necessarily be of no avail to the average man of our era. The presentation of God as power and fear awakens a very modern habit of critical reaction. This is fatal to religion, for religion must command our immediate assent to be effective. Religion must be regarded as the reaction of human nature in search of a higher ideal. Religion is the vision of something which stands beyond, behind and within the passing flux of immediate things; something which is to be realised as the remote possibility of something that gives meaning to all that passes, and yet eludes apprehensions, something whose possession is the final good and is yet beyond all reach. It is the one element in human nature which persistently shows an upward trend; apart from it, human life is a flash of occasional enjoyments lighting up a mass of pain and misery, a bagatelle of transient experiences. The religious vision claims nothing but worship, and worship is a surrender of the self. The power of God is the worship He inspires. He is a lord of the heart and we should be foolish to seek for Him a metaphysical and physical existence, tugged along the road of dust and dirt, with the presumptuous noose of our logical faculty.

The conclusion, to which a study of physics brings us, opens before us a new perspective supposed to be built up among the bed-rock of non-sensuous rationality of mathematics. On this structure we weave every day the magic dance of colours and sounds, the grand flowers, the chirping of the birds and moonbeams intoxicating us into sleep. It is on this dreamy land that we appear to ourselves as persons tied with bonds of love

and sympathy in the march of our progress or our doom. It is here in society that we weave another type of reality to which we ascribe such value and importance that we often count our own life as insignificant. We love pleasure and we love to be good. We want progress and we have persistent faith in our toil towards the ideal. But from where does the call of our ideal enchant our spiritual ears, like the music of Krisna's flute from the groves of blossoming trees? What is it that instils its faith into us, hope and trust and determination, that run through our veins like a ruddy liquor. What is it that calls for our courage, in the midst of the most thwarting misery and shame? What urges us to surrender our vanity and humble our pride and makes us look forward for a life of pure sincerity, unsoiled and untrampled by the onslaught of our mad desires. Our experience, therefore, reveals to us a land of light, benevolence, and love, which shines far off in the mental heaven, always eluding our grasp, yet always deluging us with its beams, such that love pulsates with every beat of our heart, the gestures of our face and every twinkle of our eye-lashes. Science has nothing to say against it. Science only demolishes the useless rubbish or imagery which were introduced in religion in the mythical ages for practical purposes.

CHAPTER V

BIOLOGY AND RELIGION

The maximum number of stars visible to the naked eye are 3,000; and the total number visible in both the hemispheres is about 6,000. But with a powerful telescope the number increases to 20,000,000. If the sun is represented by a sphere, one inch in diameter, then the earth would be represented by a grain of sand 1|100 inch in diameter, at a distance of 10 ft. The sun is rushing through the space at the speed of 12 miles per second. Spectroscopy has proved that the stars are like the sun and have more or less the same composition. Matter is therefore the same throughout the whole universe. No less than 8 to 20 hundred thousands of visible stars lie in the milky way scattered about and are called the nebulae (dim, cloud-like forms, visible, only with the telescope). The nebulae are of different kinds and can be distinguished by the spectroscope. Some of them are of a gaseous kind, self-luminous, containing primarily hydrogen, helium, and nebulium (not found in earth). Nebulae of Orion are about 6×10^{22} times the volume of the sun, and its density is one-billionth of that of the ordinary atmospheric air. The ratio of the diameter of the earth to the sun is 1 to 100, so the ratio of their volumes is 1 to 1,000,000. The ratio of the densities is 4 to 1. From this it can be inferred that the sun is neither solid nor liquid, but some kind of a very dense gas—denser than water, viscous and fluid in form; yet it is a gas having elastic properties. In the shining surface, the photosphere, there are bright cloudlets with rapid motions, and there are large spots where the cloudlets appear to have been sucked away; these seem to be great holes in the sun. Covering the shining surface is a rose-coloured stratum called the chromosphere, great masses of which called prominences rise up here and there, above the general level like tongues of flame; and outside this, again, is a mysterious halo of faint light called the corona. The sun

moves round on its own axis which is inclined to the plain of earth's rotation. The period of rotation si about 24 days.

Our suppdies of heat come from the sun. The sun is slowly contracting, and as there is a fall in the level of the sun's surface by this contraction, the fall itself generates heat and so the sun gets an additional supply of energy. A shrinkage of 500 ft. would produce as much extra energy as the sun radiate in 5 years. The shrinkage will be 40 miles in 1,000 years, and even in one hundred thousand of years it will not appreciably decrease in size.

Geologists require 1,000,000,000 years for the evolution of earth into its present condition. But since the discovery of radium, physicists have been willing to concede a period vastly greater than 1,000,000,000 years. The planet nearest to the sun is 35,000,000 miles and the remotest (Neptune) is 27,00,000,000 miles away from the sun. Between the orbits of Mars and Jupiter there are some 500 planetoids 20 to 400 miles in diameter, which revolve round the sun.

Certain remarkable features point to the view that the members of the solar system had a common origin. Laplace assumed the existence of a primeval nebulae of a diameter of 6,000 million miles. The sun forms the most condensed portion of this nebulae. But this hypothesis has to be given up for mathematical reasons. According to the meteoric hypothesis, the whole of space is more or less filled with meteorites which had their origin in colligations of celestial bodies; but it is difficult to imagine how the disruption could yield a central mass of the magnitude of the sun, which would become surrounded at once or gradually by eight other relatively large masses and many small ones, all revolving in practically the same plane. There are also many other fundamental difficulties which have led to the abandonment of this theory. Professor Chamberlain puts forward a hypothesis in which he suggests the acceptance of the nebular theory under particular conditions.

In the sun, there is known to be such a persistent eruptive tendency that huge masses from the interior, called the sunbolts, are frequently shot forth with the velocity of 100 miles or more per second, and they rise some thousands of miles above

the glowing surface without an outside attractive force. It is quite imaginable that if a star passes by it, bolts of greater mass would be ejected with greater velocity. Thus, from so simple a cause as the gravitational attraction of a passing star, there may arise a series of violent eruptions graded according to the closeness of approach. Each of the rejected masses would swing into an orbit of its own, which may be determined by the forces of attraction brought into play by the changing relation of the two bodies. No very close approach of the star would be necessary in order to call forth the relatively small ejections for the birth of the planets, for only 1|745 of the sun's substance was required for the whole planetary system, the average mass of the planets being only 1|6000th part of the sun. By the attraction of a passing star the gravitational force of the sun would be reduced and the molten body would bulge out in the form of a sphere. While a bolt is moving out and falling back, it would be drawn aside in the direction of the movement of the passing stars, since the pull of the star is always moving to a new line, directed from its new position. A tangential element is thus introduced. The forward motion, imparted to it by the pull of the star, may carry with it such transverse momentum that being pulled out far forward by the star, it would on its return journey fail to strike the solar disc, and sweeping by, would swing into an elliptical orbit round the sun. Of course the sun-bolt hypothesis is still a hypothesis, but it covers all the facts and satisfies all dynamical principles that are known to us, and it has stood the test of a mathematical analysis, and may now be regarded as true until a better solution is available. Scientific considerations allow us to hold that the heavier materials sank into the core, whereas lighter materials formed the crust of the earth. The formation of the atmosphere, both as regards composition and volume, must in the main have depended on the power of the young earth to hold the molecules in various constituent gases. But as the molecules of water vapour have higher velocities than those of nitrogen, oxygen and Carbon dioxide, the formation of the water of the ocean was later than the formation of the atmosphere, the water vapour condensing into liquid.

If, as we said before, the earth was a product of fiery bolts from the sun, the climate of the primitive earth, must have been very hot, as is evidenced by the existence of granites at the foundation of rocks of the earth's crust, which was the first rock formed by the solidification of the molten globe. The geologists divide the history of the earth into four great eras. The first era includes the dawn of life on earth, called the Eozoic or Archaeozoic age. The second era is that of animals and plants, called Paleozoic. The third is characterised with the development of animals and is called the Mesozoic era, and the last era is that of ours called the Kinozoic. The first or the Eozoic period is divided into two sub-periods, the second into six, the third into three and the fourth, i.e. our own era, into five. We can judge the climate of any period or locality by the animals or plants that lived in it, and also by the formation of various kinds of rocks. There is sufficient evidence that the different parts of the earth did not cool down uniformly. In the carboniferous period of the Paleozoic era there is the evidence of the existence of ice and glaciers in parts of India where there are no glaciers today, when those parts were colder than other parts. When the earth was gradually cooling down, the metals being heavier sank towards the centre, and the scummy material floated upon it. As a matter of fact the materials of the inner earth are twice as heavy as the rocks on the surface. The earth, therefore, contains two crusts, the upper or the stony crust called Lithosphere, and the inner metallic mass called the Barysphere. The existence of this Barysphere is proved by the radio-activity of the materials within a layer of 45 miles deep. The rocks themselves are also formed from minerals. Earthquakes also supply us corroborative evidence of the internal composition of the earth, judging from the fact that an earthquake shock on the surface, and two others in the interior twist the material, have different kinds of velocity, the inner ones having much greater velocity than the surface-waves. The three kinds of velocity, which again also differ according to the direction, can be explained by the supposition, that there are three different kinds of zones according to the distribution of different kinds of materials. By various mechanical or chemi-

cal processes the materials, originally scattered through the rocks of the earth's crust, and floating in air or water, have been collected into layers, and formed beds of sands, clay, lime stone, salt and the various minerals, fuels including coal. In process of time, the primary rocks, exposed on earth's surface, were all broken up, though in certain areas primary rocks still exist, being raised from below as the parts of the rocks of the surface were destroyed. The land surface is gradually being raised from below, and some parts have risen earlier than others. Scandinavia existed as land since very early geological times. Two processes are generally at work, namely, that of lowering the land, and of uplifting it. By these two processes the earth has formed its geographical evolution or the distribution of land and water. The rates of subsidence and deposition of sediments are so often the same, that the probabilities appear overwhelming, that there must be some direct connection between the two. The most probable explanation is that the extra weight of the fresh sediment itself causes the sinking of the area, over which it is spread, and the lifting up of the adjacent land, enables it to rise by the removal of a layer of sediment. The newly erased land is then attacked by denudation, a fresher layer of material is transferred from the land to the sea floor, which therefore sinks again, and the process is continued indefinitely. The greatest part of the earth is occupied by water, but the question arises, was it always so? Nearly every part of England has been many times alternately raised above and submerged beneath the sea. The evidence of the distribution of animals and plants proves the former existence of continents that have been dismembered, and of land routes that have foundered beneath the ocean. The conditions of land and water had continually changed throughout the geological eras so much so that the plan of land structure in the primary and the secondary stage, would be wholly unrecognisable from our present-day point of view. Then, in the Jurassic period there were two big islands on the north and south of the equator, and two small islands on the north of the equator, and another middle-sized island on the east, and a few other very small islands in the north of the equator. In the lower Cretaceous period the shape

of these islands changed completely, and in addition to these big islands, five other middle-sized islands sprang up of which four were below the equator. In the upper Cretaceous period we find that South America had already taken its shape, while North America was looking like the trunk of an elephant; India had taken somewhat of its present shape and Arabia was an island. The northern part of Asia had formed its general shape. There was a big island forming the southern part of present India; Africa was an island, and there were a number of islands between Africa and Europe, which had appeared only in an unshapely form. It was in this way through various changes that we come to our modern shape of the world, pretty nearly formed as we have it now, in the Pliocene age.

We thus see that the shape of the world in its inorganic sphere as distribution of land and water, the formation of rocks and volcanoes and various kinds of stones, was following a course of evolution more or less of the same type as an embryo in mother's womb. The molten earth after throwing off the moon, cooled down gradually. Its lighter materials were squeezed out to form a crust; heavier ones clenched below in the core; the exterior crust of the earth was a layer, through which the internal heat of the earth and of the radio-active minerals could not easily loose itself in space. The heavier rocks inside remelted, and their eruption of lava flowed out on the surface, and was utilised in hardening the crust of less dense parts, and parts of this crust collapsed, which, the geologists believe, was the cause of the great basins of the sea. Great volumes of water vapour and other gases were pouring down on earth making its atmosphere vapoury, which condensed into an unbroken sea of clouds through which the rays of the sun could hardly penetrate. The larger planets, like Jupiter, continues to exist in that stage even now; and it is for this reason that we do not see the solid surface, but only the light which is reflected from their cloudy cover. Rain poured in continuously, but again turned into vapour, before it reached the surface of the earth. Finally when the crust cooled sufficiently, liquid rain fell and accumulated in the lower hollows, and it is this condensed water vapour that gave the ocean its water. With the fall of the rain, sedimentary

rocks grew, and salt from the crust dissolved in the water, and washed down to the hollows. As soon as the condition became favourable, the sun's rays played their part in stimulating life The mystery of the origin of life will probably always remain a mystery. We can only say that life sprang up when all its environmental conditions were ready. It is an important fact to note, that there are no elements in living matter which are not available in its lifeless environment. I shall try to discuss later on some of the important theories dealing with the origin and maintenance of life. Looking from the physical point of view, we can say that the energy, displayed by a living organism is fully accountable on a material basis. Apart from other features of life, reproduction is the most important. No human arrangement can ever be conceived of producing such a self-producing organism as the living one does.

About two centuries ago most people believed that all types of living beings were created by God. At the time of the deluge, Noah and his arc had put in pairs of all kinds of living beings. But evidence began to accumulate steadily that the existent forms of life were not the only forms that had been existent all along on earth, and that there had been many other kinds of animals and plants which had passed away from the globe but traces of which can even now be found. The development of the science of geology opened up a new chapter of activity. It was found that the history of the earth did not begin with men, but long ages had passed away before man appeared on the earth; that fauna and flora, much more different from those, that can be seen now, came first over the earth. Wells thought that we could still imagine something of the excitement of our grand-fathers, when the fantastic and marvellous Dianosaurs, the flying dragons of the Mesozoic period, were revealed to them. The palaeontologist is bringing everyday new information about new animals in the past. The creationist and the follower of the Bible and other Holy books opposed this new theory and even quite recently in some of the American States, e.g., Texus, the literatures of the new schools are forbidden, lest it may have a detrimental influence on religion. The myth of Adam and Eve, and the doctrine of original sin and all

the church controversy over it for many centuries, fell to the ground, by the assertion of the pre-historic story of life and the evolution of man from life's lower status. The attention of the new-thinkers was drawn to the fact, that all the manifold forms of life, that passed away from the face of the globe indicate an orderliness of ascent. Even if there were no other evidence, the proofs, kept in the writings of the fossils, would be enough to show that there has been a steady evolution of the living bodies and their functions in accordance with their environments. But the other evidences from the various directions, that are now at our disposal, disprove incontrovertibly the theory of creation. Now, in order to prove that evolution is all-pervasive in all forms of life, past and present, one has to prove that the fossils, that have been discovered, show the steps by which one species passed into the other. If the animals had been created, they must be adjusted to their conditions, and there should be no reason for having animals with imperfect adjustment of structure. If a cat has to live on birds, it ought to have wings; but if the animals evolved step by step, perfecting its maladjustment at each stage then the situation would be intelligible. It would also be necessary that plants or animals should have the special organs for their needs. If the evolution theory be true, then there should be a harmony regarding the distribution of animals and plants. If there is a region wherein an animal may live comfortably, but that animal is not there, then the case of evolution is weakened; for the theory of evolution supposes that the environmental condition stimulated the origin of that particular kind of animal or animals. The other question is whether man is an exception to the evolutionary law or not.

Fossil means, anything which has been buried beneath the surface of the earth by natural causes or geological agencies, and which bears in its form or chemical composition the evidence that it is of organic origin. We know that the flowing waters bring down sediment and deposit it in layers on the floor of seas and lakes and also on plains, and thus new lands are formed. After a volcanic eruption the fiery contents of rocks and lavas often flow down into the sea and sink in the bottom, and from the surface-layers of the oceans, skeletons of animals and plants,

big and small, often sink into the depths. In these and other ways new materials are accumulating as they had done, also, in the past in various parts of the earth. These are called often sedimentary or stratified rocks. In these stratified rocks fossils are often entombed which reveal the trace of dead animals and plants, very different from those creatures that we know today. If one digs a clay quarry from Dorset to Peterborough, giant reptiles called Ichthyosauria, which are wholly unlike any animals that we know, are found. We find there also spiral ammonites, which probably had a body, resembling the cuttle fish and octopus. William Smith, an English Surveyor, found out that chalk, woolite limestone, red sand stone or clay occurred as layers over large areas of the country, and whenever these layers were discovered, their order was the same. The gault clay, close to the chalk was succeeded by a layer of green sand immediately below the gault. The woolite limestone are always many layers under the chalk, and red sand stone, many layers beneath the woolite, and each layer contained its own layer of fossils. Thus the London clay layer lies above the chalk layer, which contains fossil fruits of palms, shells, and sea snails and mammals, but no ammonites or Ichthyosauria. But the gault clay below the chalk has no palms but contains ammonites. This means that it is possible to arrange the sedimentary rocks according to their age, and the fossils found therein may also be chronologically demarcated. We can now say that one kind of fossil belongs to animals which lived and died before another kind of life arose. The ammonites are absent in all layers beneath the coal layers and also above the chalk. The Ichthyosauria have the chalk as the upper limit and goes downwards through about two-thirds of the layer in which the ammonites lived. The science that deals with the arrangement of the earth's crust according to time is called Palaeontology.

The progress of evolution has been from simple beginnings to more complex and versatile types. At the time of the earliest rocks there was practically no trace of life. From the Archeozoic era life dawns. In the Proterazoic era we have only the worms. In the Paleozoic era there are no vertebrate and land life. The vertebrate life begins with the Ordovician era; fishes

and land plants and invertebrates appear in the Silurian period. In the Devonian and the Carboniferous era we have many animals of land and in the Permian era the reptiles first appear. Mighty reptiles and dragons having wings came in the Mesozoic period. In the Cenozoic era we have the modern life of mammals, birds, grasses and flowering plants and trees. These eras may also be styled as primary or Archaeozoic, Proterazoic and Paleozoic together, and secondary or the Mesozoic and Tertiary or Cenozoic. A fourth term is also added, called the Quaternary which is the most recent. A Biblical scholar calculated the date of creation of the world to the four thousand B.C., and this is supposed to be based on the authorised version of the Bible. But according to the modern scientist it is many million times earlier; he thinks that for each period we have to put in about a million year.

It must be remarked here that only in few places the fossils of the extinct creatures have been preserved. The great majority of dead things simply decay and disappear, and their materials return to the general circulation of nature. Even when they are preserved, they are only bits of corpses changed into rocks. Often the bones slowly dissolve away and are replaced by mineral substances. In this process they suffer various degrees of distortion though luckily sometimes they are preserved very accurately. They are sometimes dried foot-prints, on a bit of skin or shell. The creationist often argues that the full pedigree of any of the living forms of animal is not available. But this is not true. Many of the animals, that are now existent, can be traced back to their original forms to a great extent. Darwin himself recorded the three-toed fossil horse. The existing horse represents a very distinct family of animals. The pedigree of the horse has been preserved in four stages in the fossils. In the last stage they resemble the existing horse except in details of proportion. In the third stage we find horses with three hoofs on each foot, the two outer hoofs being too small and useless for running, as they do not reach the ground, but hang in the air like the dew-claws of the deer, and the teeth are much shorter. These are found in China. In the second stage, the horses were also three-toed when all of them touched the ground and the

tooth-pattern much less elaborate. In the earliest stage the horses were like the terrier dogs and they had four little hoofs on the fore-foot and three on the hind one. Without entering into any details we may say that the horses in the past, were less efficiently adapted for swift running and for grinding hard plant stems. The evidence of fossil plants makes it clear that during the Cenozoic, from Eocene to Pliocene, the climate of the north temperate and sub-tropical regions became more and more dry and much of north America and Eurasia became full of forests. It is quite probable that some of the animals came to the new world to try their luck. Being there, they found the grass hard to chew and, big forests not being there, they could not hide themselves behind anything, and had to save their lives by running. Some of those animals, whose teeth were more adapted to the hard grass, chewed well, gained strength, and, if their feet were stronger, saved themselves by running from the wolves that ran after them. The earliest four-toed horses were forest dwellers, used to soft vegetation; but the three-toed horses, were those that grazed in the fields. As the plains increased more and more in the Cenozoic period, the horses with three toes were better adapted for life than the horses with four toes, which later on became extinct. A comparison of the anatomical structure of the various types of horses, proved it beyond all doubts that there have been a progressive chain and adaptation to new environments in the development of the horse. An examination of the various other animals, also, shows similar structural developments at different stages of geological history. Earlier elephants began with four tusks. With increase in bulk, the elongation of the tusks became a difficulty, and a longer neck was substituted by a shorter one. The birds and the reptiles also showed intermediate forms and structural affinities by which they could be linked up in a chain. The mammals are also now linked by fossils with their reptilian ancestors. Reptiles have been found which nourished their young ones by milky secretion and possess a coat of hair, and yet they lay eggs, and show many other peculiarities of the reptile class. The teeth of these animals were gradually differentiating and the whole form of the skull was approaching that of a mammal. But they still re-

tained the little hole in the top of the head. Again, the mammals have to complete bones in the lower and the upper jaws, instead of several distinct zones, stuck together. At the same time there are three little bones in the mammal's middle ear for communicating the vibration of the ear drum to the sense organ of hearing, but other vertebrates have only one. It was suspected for a long time that the two extra bones in the mammal corresponded to the two bones of a reptile, forming the hinge-joint of the upper with the lower jaw.

A comparative study of anatomical structures of the different animals shows that the fundamental bony structure is everywhere the same, and one can start with a particular form, and through short changes and variations arrive at the desired structure. The evidence of blood-chemistry shows that the blood of some animals is more akin to the blood of a particular group of animals than to others, for the mixing of the strange bloods produces violent reaction and precipitation than when the specimens of blood of two animals that have affinity are mixed; and this testimony of blood-chemistry agrees with the verdict of affinity produced by comparative anatomy. In the same manner, the testimony of blood-chemistry shows that a man is more akin to a Chimpanzee than to a tailed monkey and more akin to a tailed monkey than to any other animal. The same response is available by the injection of vegetable proteins in the blood. The study of human embryo, also, at different stages of its growth shows that it resembles so much the embryo of the different animals, that it becomes difficult for even an expert biologist to distinguish the human embryo from the corresponding one of another animal whose appearance it imitates. Haeckel by comparing the embryos declared that the embryo of any animal through its transformatory courses repeated the history of its long ancestry in a general manner. Thus the embryo of a cat or a dog resembled the embryos, at different stages of its growth, of the long chain of previous animals which formed its past history, but not the embryos of the animals which came after it; this is called the theory of recapitulation.

The present distribution of man and animal, is based on

the distribution in the past. It is the evidence supplied by palaeontology and geology, that bring home to us the fact, that the land structure in different periods of ancient times were different; where insurmountable ocean now appear, there were probably land connections in the past. Everybody knows the different kinds of animals found in different countries. But it is not always found that different countries differ in respect of whole groups of their animal and plant inhabitants. Africa, South America and Australia comprise temperate and tropical regions, but their animals were all unlike. Thus Africa has antelopes, rhinoceroses, giraffes, elephants, hogs, zebras, lions, leopards, baboons, buffaloes, gorillas and chimpanzees. But there is no deer, no beavers, no field-mice, no bears or goats or sheep. Contrasting this animal habitation, we have in south America, Llamas and their relative ant-eaters, edentata, armadillos, primitive monkeys with prehensile tails, vampire bats, peccaries, lupines, guinea-pigs none of which occur in Africa. Most of them are restricted to south America. Australia contained none of the higher placental animals, with the exception of bats, mice, dingo-dog, the pouched marsupials, egg-laying monotremes, kangaroos, wolf, etc. It was formerly supposed that each species and each group lived in the place best suited to it, but this is demonstrably false. Thus New Zealand has no mammals, but mammals can thrive there when introduced. The question comes as to the meaning why the whole host of related animals are restricted to limited regions. The answer is to be found in the past, in the history of evolving life, in relation to the history of the seas and the continents. Through fossils we are able to discover the past distribution in each epoch. Geology can tell us a lot about the past distribution of land and water at different times. Thus there was a time when Greenland and North America and eastern North America were connected with Northern Europe and central Asia, through Malayas with Australasia, whereas South America remained isolated. Africa was connected with India and they two together were isolated from Asia and Europe. It is for this reason that the marsupials colonised in Australia from the Euro-Asian mainland. But soon afterwards the land bridge was destroyed, and Aus-

tralia became isolated. Thus wherever there is land connection the arrivals are found to migrate. If the mammals evolved after New Zealand was cut off, we should not expect to find any land mammals there. In the same way the problem of distribution of the human races, often so puzzling at first sight, clears up as soon as we know the history of their movements. The Mongal Turks in Asia Minor or the fair haired Lombards in North Italy, may appear at first sight to be an anomaly, but with the knowledge of their migration the anomaly disappears. During the most of the late Mesozoic era, Australia was connected with the rest of the world, and therefore animals akin to Australian are found in North America. It was owing to the insulated condition of Africa, that African animals are not found in South America.

The three types of evidences on behalf of evolution are then historical, anatomical and embryological. Structural similarity such as the wing of a bird and the arm of a man, both being four-limbed and having fundamentally the same structure as regards bones and muscles, and blood vessels and nerves, suggests their homology, or same origin. Again, the wing of a bird and the wing of a butterfly, both being organs of flight, but having no structural or developmental resemblance, may be regarded as analogous, but not homologous. Again, the wing of a bird and the wing of a bat, having similar structural affinities, may be regarded as homologous. The evolutionary suggestiveness of homologies is indisputable. It is curious that though there is a close similarity in the fundamental material and the mode of origin, the final result is very different. Another set of suggestive facts is, that old organs appear in a new guise. The poison gland of the snake is a specialisation of the parotid salivary gland. The domestic influence of man on animals has also shown that great changes can be produced in birds and animals by controlling and varying the environment. Thus there are over 200 well-marked breeds of domestic pigeons, and there are at least ten that would be ranked as distinct genera, and this is found also in the case of poultry, and in the case of flowers and herbs.

But what is the criteria of life? Roux recognised five

elementary functions of life, (a) self-disassimilation, (b) self-preservation, including assimilation, growth, movement, feeding, (c) self-multiplication, (d) self-development, (e) self-regulation in the exercise of all functions including self-differentiation, self-adjustment, self-adaptation and in many organisms, in distinctly recognisable psychical functions. But Thomson says that life may be described as a two-fold relation of action and reaction between organism and their environment. The chief responses are towards self-maintenance and self-continuance of the race. Life is the power of persisting in a complex specific metabolism and in a corresponding specific organisation. The metabolism consists in the upbuilding and down-breaking of protein substance in a colloid state. Each living creature has its own chemical individuality and specific architecture which may be microscopic or ultra-microscopic. The secret of life is to be sought in the co-relation of the chemical processes. It is on account of this co-relation that the organism can persist in its integrity amid ceaseless changes. Then comes the capacity of growth, reproduction and development. Growth consists in organising an increase of living matter by assimilating materials suitable for it. Reproduction means the spontaneous power leading to the origin of new individuals. Development consists in repairing the loss and organising the living material. The other kind of criterion of life is effective behaviour, registration of experiences and experiments and variability. Behaviour means an organically determined series of actions converging towards a definite result. Its common features are correlation, individuality and purposiveness. The organism has the power to profit by experience. It has also the power to give rise to something that is distinctively new.

Though chemical, physical and electrical processes that are going on in the body, cannot explain either qualitatively or quantitatively the different movements of the body, the evolving organism is a psycho-physical being, and the variability that it undergoes, and the selection that it makes, cannot be made by mechanical means. Thomson further holds that the chemical and physical formulation cannot explain the functions, behaviour, development and evolution of living creatures. There

have been theories which attempted to explain life on a purely physico-chemical basis or by the supposition of a life-force. There are others, again, who hold that it is the mind that makes all the difference. Others, again, hold that probably by enlarging the concepts of physics and chemistry we could define life. There are others also who hold that the mere fact of the greater complexity of the configuration or colligation of elementary particles which make the organism, does not call for a new concept of biology. Other vitalists think that the organisms have a monopoly of a particular life-force, which is indeed a new kind of energy, probably electricity. But the most thoroughgoing vitalist postulates a non-perceptual vital agency which directs the chemico-physical processes and makes it different from what it would have been without it. But life has to be explained by ultra-mechanical concepts—a new concept other than physics or chemistry which regard the organism as a psycho-physical individual, which can register within itself experience, and has the conative urge towards the future. Without introducing any new force it is better to explain life from the point of view of a new concept.

Kirchhoff defined the task of mechanics as describing completely in the simplest manner the motions which take place in nature. Our question is whether, mentality apart, there are such peculiarities in vital phenomena that cannot be explained by physico-chemical description. Chemical and physical processes take place in the body. The body is continuous with the universe in which it lives, it has the same elements working, carbon, hydrogen, nitrogen, etc., but the protein substance that it produces in a colloid state is peculiarly its own. It is curious that each animal body prepares its own special kind of protein, and that even now we cannot prepare it to any appreciable extent synthetically. Chemically regarded, life involves a complex of chemical reactions in the protoplasm. Some of these phenomena such as oxidation, reduction and the like can be performed outside in the laboratories. If we consider the potential energies of the waste products and the storage products we find that the heat given off is in accurate correspondence with the energy taken in. Rubner proved by the calorimeter

that the heat energy given off by an animal during a prolonged experiment was the equivalent of the food taken in with only a discrepancy of 5 per cent. which was inevitable to the conditions of the experiment. Van't Hoff formulated the chemical law that the rate of a chemical process increases in geometric progression when the temperature increases in arithmetical progression. The velocity of the reaction is doubled or tripled by rise of temperature of 10°C and it is lowered also in a similar manner by the fall of the temperature. But we know that the heart-beat of animal so widely separated as the tortoise and the water-flea, is reduced to about a half if the temperature be lowered 10°C and this led to a seeming corroboration of Van't Hoff's theory. But the law does not hold good elsewhere. The rate of development of the eggs of the plaice is directly proportional to temperature. In fish and frogs, water beetles and sea-urchins, Van't Hoff's law fails altogether. In the transformation of energy in living bodies, the living cells act selectively and in some measure evade the second law of thermodynamics. Thus a steam-engine is only able to change about 12 p.c. of its potential energy into work; while the animal can change about 25 p.c. Moreover an organism has a capacity for dealing with some kinds of chemical substances which cannot be converted into useful energy by inanimate agencies. The chemical energy of food can be directly transformed into work without passing through the stage of heat. Again various conditions prevailed in the animal world, which are not found in our laboratories. Thus the torpedo fish living in water behaves as a leyden jar, and the moisture does not in any way affect it. A moist tissue prevents the passage of water by virtue of being alive. Many chemical and physical processes go on in the living body which are similar to those which may be performed outside but on conditions and circumstances, in which no such reaction could be repeated in the laboratory. The organs moreover often behave in a selective way for the benefit of the organism in such a manner, that our mechanical concept fails us. There is a thin delicate membrane in the air-cells of the lungs, which separates the blood in the lung-capillaries. It was so long held that it plays only a passive part,

but it has now been found that whenever there is need for an extra-supply of oxygen as in the case of muscular exertion, the membrane becomes active and forces oxygen inward against the laws of the mechanical diffusion of gases. A minute and scarcely measurable increase of the hydrogen ion in the concentration of blood excites the respiratory organs of a warm-blooded animal to intense activity. Minute alteration in the concentration of water sugar, sodium chloride or hydrogen ions have a remarkable influence on the secretory activities of the kidneys. In a furnace, combustion takes place and is stimulated in accordance with the supply of oxygen; in the human body the oxidation increases or diminishes in accordance with the supply of oxygen which is regulated by the living cells. These, and many other similar considerations indubitably prove the fact, that the animal organism and its behaviour, as well as the internal processes that go in it, cannot be explained on a mechanistic or chemical basis, though chemical and mechanical action take place in the body. The extra-ordinary behaviour of birds and insects, both in making their nests and also in returning to them, can never be explained on physical basis.

William James in his famous essay 'Is life worth living' says, "Visible nature is all plasticity and indifferent,—a moral multiverse, one might call it, and not a moral universe. To such a harlot we owe no allegiance. With her as a whole, we can establish no moral communion. Beauty and hediousness, love and cruelty, life and death keep house together in indissoluble partnership; and there gradually steals over us instead of the old-worn notion of a man loving deity, that of an awful power that neither hates nor loves but rolls all things together meaninglessly to a common doom."

Herbert Spencer describes philosophy as the ultimate unification of knowledge. After reaching this conclusion, Spencer considered the data with which philosophy must set out. Fundamental propositions, he thought, could be established only by showing the complete congruity of all the results reached on their hypothesis. Proceeding on this line he demonstrated the indestructibility of matter, continuity of motion and persistence of force. He interpreted the uniformity of law on the basis,

that force can neither arise out of nothing, nor lapse into nothing and that there is a continued persistence of the relations among the forces. Forces, that appeared to be lost, are transformed into their equivalence of other forces, as illustrated by the motions of the heavenly bodies in all the changes, that go on in the earth surface, and in all organic and super-organic actions. That, which, can unify knowledge, should be the law of co-operation of the factors, a law that expresses simultaneously the complex antecedents and the complex consequents which any phenomenon as a whole presents. The law must also be the law of continuous re-distribution of matter and motion. There must be a law of the concomitant re-distribution of matter and motion which holds of every chain, and which, uniting thus all phenomena of changes, becomes the basis of philosophy. All progress must be a history of the effectuation of this law. The opposite poles of the advancement of this law, are evolution and dissolution. Evolution is always an integration of matter and dissipation of motion. The primary re-distribution of matter and motion, is associated with secondary re-distribution in consequence of which different kinds of evolution are produced, simple and compound. It was found that a concentrating aggregate that loses its continued motion rapidly or integrates quickly, passes into simple evolution, but when its components hinder the dissipation of motion, the parts undergo secondary re-distribution of more and more complexity. In all evolution, organic or super-organic, the change in the arrangement of matter is accompanied by a parallel change in the arrangement of continued motion. Every increase in structural complexity, is associated with a corresponding increase of functional complexity. Thus, by a re-distribution of matter and motion, evolutionary complexes became gradually more and more heterogeneous, complex, coherent, determinate and co-ordinate. In all the different fields of evolution, astronomical, geological, biological, psychological, sociological, etc, we have the same law of metamorphosis. Thus the re-distribution of blind matter and force, was with Spencer the principle of evolution. Spencer believed in an ultimate source of energy, which, in its own nature, was unknown and unknowable and which could only be knowable, when it allowed itself to be

transformed through the evolutionary complexes. Since there is a via media between the two aspects of nature, we should neither emphasise a gratuitous anthropomorphic unity nor the aspect of discord.

Throughout the evolution in the animal or vegetable world, we find one persistent attempt to adjust relations between the active self-assertive and insistently insurgent organism and environment. The inorganic environment is callous, irresponsive and yet amenable to life's purposes. The environment always provokes, nurtures, kills and buries the organism and the organism responds to the environment, changes it, defies and masters it and uses it for its own purpose. The business of life is thus the continual adjustment to its environment. The two-fold object of life is to preserve it and its race. Hunger and love are its two principles.

One of the great facts of life is its struggle for existence. Darwin said, all that we could do was to keep steadily in mind that each organic being is striving to increase in geometrical ratio, that each at some period of its life, during some season of the year, during each generation or at intervals, has to struggle for life and to suffer great destruction. When we reflect upon this struggle, we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt and that the vigorous, the healthy and the happy survive and multiply. This does not mean, as some naturalists hold, that the struggle for existence means nothing more than life and death competing with each other. The two dangers of life are, first, overpopulation, and, the second, is the change in the pattern of life, the higher devours the lower, and there is also the changefulness of the physical environment. But all these difficulties can to some extent be provided for. Millions of minute creatures flourish in the sea without overcrowding. The length of an organism's life is adjustable, and can be regulated in relation to the rate of increase. It is conceivable that all animals might be vegetarian and there is no necessity for supposing that life should be continually troubled by environmental changes. The struggle for existence is not an inevitable consequence of the conditions of life. Reduction of the num

ber of offsprings may prevent overcrowding. Vegetarianism may avoid the destruction of animal life, and migration to happier zones may remove environmental difficulties. The true limitation, therefore, is to be found in the self-assertive tendency of the individual that it would do what it liked. The central idea of the struggle for existence is the clash of life and its limitations. The effort of the animal is for its well-being, for it wills to live and live well. It is, again, a confusion of thought to identify a struggle for existence with natural selection. For, in many cases the struggle for existence does not lead to discriminate elimination. The elimination often takes place by the effort of the physically stronger by obstructing the life of others whose presence and scope of development might have been a source of strength to both the physically stronger and the weak. This is particularly true in developed societies, which, being used to intellectual and moral culture, may lose their brutal power of successful opposition, and fall an easy victim to the rapacity of the barbarian and the greedy, who, by destroying the more cultured ones, may have to build their civilisations anew. A point in illustration is the destruction of the Roman empire by the barbarians.

Darwin held that the struggle for existence is (a) between the organism of the same kith and kin; (b) between foes of entirely different kinds; and (c) against the environment. Darwin based the validity of his first proposition (a) by referring to the fact, that there is an internecine competition between the brown and the black rats. But a reference to actual facts, e.g., the introduction of the brown rats into England from the east, has not proved that they have swallowed or destroyed the black rats which were introduced earlier through the mediterranean ports. Dr. Chalmers Mitchell, who investigated the matter said that in this story of the rats, which has been very carefully investigated, there is no trace of a process comparable with the German theory of war, as an instance of the struggle for existence. Each species has its different aptitudes, capacities and preferences, and each insinuates itself into the most suitable environment. The internecine struggle did not take effect, and a compromise was effected. Regarding the second proposition also, facts prove that sometimes competition had been keen, while on other occasions

it was only an one-sided affair. The third proposition is not really a competitive struggle, but it is fighting with fate. So we see that, in the struggle for existence, direct competition is often absent, though it may have its exception as in the case of the battles between different kinds of ants, bees etc.

This criticism of Darwin gives lie to the theory, that all development must be effected by internecine and intra-specific competition. Individuals, that may have possessed a variation suitable to environment, may have flourished. The theory, that struggle for existence is fundamental to development, is therefore groundless. Herbert Spencer showed with success that the purely self-seeking animal is a fiction. From the dawn of life altruism has been as essential as egoism. Darwin himself shows in his "Descent of Man", that in many animal societies co-operation rather than struggle has been the cause of development. Thus Darwin believed that the feeling of pleasure from society is probably an extension of the paternal or filial affections, since the social instinct seemed to be developed by the young by remaining for a long time with their parents; and this extension might be attributed in part to habit, but chiefly to natural selection. With those animals which were benefitted by living in close association, the individuals, which took the greatest pleasure in society, would best escape various dangers, whilst those, that cared least for their comrades, and lived a solitary life, would perish in greater numbers. With respect to the origin of the paternal and filial affections, which apparently lie at the base of the social instincts, we know not the steps by which they have been gained, but we may infer that it has been to a large extent through natural selection.

Again, Prof. Kessler brought forward incontestable evidence in support of his theory, that in the progressive modification of organic beings, mutual support has played a greater part than mutual struggle. Prof. Patrick Geddes also argued that the Darwinian picture was false, and showed the superiority of the other–regarding sentiment and the sentiment of subordinating the self to the species, to self-gratifying activities in the progress of evolution, and the survival of the species. Kropotkin gave profuse illustration of the existence of mutual aid and mutual

support in the animal kingdom. It was as important a law of life as mutual struggle. Again, self-assertive activities find a greater scope in self-expression by subordination than by aggressive assertion. Nature has provided animals not only with weapons of fight, but also with weapons of retirement. Moreover, there are hundreds of ways by which an animal might strengthen itself without hurting others. One creature asserts itself by sharpening its claws and whetting its teeth; another by hiding itself in a place where it can be invisible. Prof. Thomson says, the false theory of Darwin that the struggle for existence is the formula of development has led to a sinister philosophy. It has given the seeming sanction of science to a soul-less commercialism and an overweening pride of race and the lust of domination. The theory of progress has been the weapon in the hands of politicians wielding military power. But every new theory has to go through infantile diseases. The worst of these arises from that distemper of the mind, peculiarly prevalent in the half-educated world of modern thought, which prompts men to pick up ideas, which, specialists have elaborated for their own purposes, in their own department, and to apply them indiscriminately as catch words to settle questions arising in another sphere.

In their multiplication, in their reproductive processes, their parental care, individuals launch themselves into activities even at their own risk. Their personal interests are subordinated to the interest of the race, by the pressure of instincts which are often fatal to themselves. In some higher animals love is its own reward. Many are the animals which undergo infinite care and trouble for the offspring which they are not even destined to see. The altruistic programme of many animals far exceed their care for themselves.

It must, however, be said that the formula of evolution is not like gravitation. It is acceptable because it fits and is seldom contradicted by facts. The evidences of evolution are mainly anatomical, embryological, palaeontological, and also chemical. But they are never more than presumptive. The real strength of the evolutionist's position is in the value of the theory as an organon. There is no other scientific formulation in the field. The weakness of the evolutionist's position is that he remains

very ignorant about the pedigree of many of the most important types, e.g., vertebrates, and about the factor leading to the establishment of great new departures, such as birds or men, and also about the causes of variation itself. The difficulty of giving a concrete account of the evolution of the vertebrates or of an organ like the eye, or a phenomenon like migration, is very great. Alfred Russel Wallace, one of the pioneers in the field, postulated the operation of spiritual influx at particularly critical stages in the evolution, as in the origin of man's mathematical, musical and artistic faculties, or in the introduction of consciousness or in the emergence of the organisms themselves. Thus Wallace says that different degrees of spiritual influx came, as it were welling up from an unseen universe, a world of spirit, to which the world of matter is altogether subordinate. When the biologist says that the evolution is continuous, he means that each stage is the outcome of what precedes. There is one continuity in the continuous succession of immortal germ cells, in spite of transformation of species here, and extension there, and the blind alien some where else; and also there is a continuity in the external staging, in the extra-organismal systematisation in the wave of life. But in spite of this continuity there is a continual change. Birds are continuous with reptiles, but not continuations of them, and at the time of their evolution there was a correlated change in the structure of the earth, which opened to birds a new world. Though birds are very different from reptiles, it is possible to imagine that the fore-limb became a wing, and a scale of feathers. It is impossible any longer to stick to Spencer and to explain the facts of evolution merely by the theory of the growing redistribution of matter and energy.

When it is said that evolution is continuous, what it really means is, that in the long span of evolution from fossil to man, there is a gradually increasing differentiation of parts and structure, a greater coherence and purposiveness, a greater co-ordination and the appearance of more and more complex characters. But conditions and circumstances may so happen that a particular form of life may become degenerated, and it always happens that particular forms of life never have a chance to rise in the progressive scale.

Of the origin of the first organisms we know almost nothing. Whether life came from elsewhere or it grew by some kind of fermentation, it is difficult to say, though the general trend of belief is that the living came from the non-living. The first germs of life must have been much simpler than the protozoic cells, and it must have taken a long time before the latter could arise. The next step of life is cellular organisation. One of the early events is the emergence and the divergence of green plants without which the evolution of animals would have been impossible. The vegetable stock, however, remained off the main line. An epoch-making stage came when the bodies were built, from the unicellular to the multi-cellular, which gave facilities for specialisation of functions, increase of momentum for storing energy and also consequent death. The next step was the differentiation of male and female. In the next stage we have the replacement of radial symmetry by bilateral symmetry, which led on to the development of head and brain. Next came the back-boned animals with a central nervous system, and this flourished on land and air. It was from this time that parental care became more organised, and finally man emerged as the summit of the whole.

The main problem of evolution consists in accounting for the continual emergence of new things or changes or variations which make an organism appreciably different from the parent. The second is regarding the directive factors which operate on the variations and determine their elimination or their persistence. Thus, when in a family a certain member is born dwarf, and the same phenomenon is repeated every second generation the question is, why the dwarf was born? But this problem we shall take up a little later. But we may say here only so far that where the distinction is merely quantitative the explanation is not so difficult, but when it is qualitative the explanation becomes very difficult. The general explanation offered is, that deeply saturating environmental stimuli act on the germ cells and provoke change.

But before we proceed further, it is advisable to say something regarding the concept of life.

Though some writers have regarded life as the result of

mechanical or material organisation, the opinion of most notable biologists is against it. The biological entities, as cells, were compared with atoms by Pasteur. But Pasteur's work was, in a word, more evolutionary than Dalton's theory. Johannes Muller in 1838, Shleiden in 1838, Schwann in 1839 and Pasteur in 1840 had introduced the notion of organism in the world of minute things. A cell was regarded as a life-atom which was capable only of external relations. Though it was sometimes thought that life might be still simpler than cells, nothing was discovered. But the atomic physics underwent successive changes. Pasteur insisted on the idea of organism, and founded the basis of life in the infinitesimal cell which is about a 100 millionth part of a centimeter. With the recentest discoveries in Physics, the idea of materiality has practically vanished; and Whitehead says that the atom is transforming itself into an organism, and the evolution theory is nothing else than the analysis of the conditions for the formulation and survival of various types of organism. But though an atom now reveals the presence within it of complex entities or characters having an order in themselves and an unity of inner purpose, it does not, according to our popular concept, respond to the idea of life; but Whitehead holds that the physical atoms may also be regarded as biological organisms. If this could be done, and if the function of reproduction could be regarded as a new emergence at a particular stage, the difficulties of abiogenesis could be somewhat obviated. Whitehead criticises the doctrine of the vitalists who admit the materialistic conception and supplement it with an additional vital control. The appeal to mechanism on behalf of biology was made for making the science well-grounded with the help of well-attested scientific concepts. But the present day science can no longer boast of well-attested concepts. Things are there in a state of flux; Whitehead recommends a wholesale change of concepts and urges that science is taking on a new aspect which is neither purely physical nor purely biological. It is becoming the study of smaller organisms, while biology is the study of larger organisms. The organisms of biology include as ingredients the smaller organisms of physics, but there is at present no evidence that the smaller

or the physical organisms can be analysed into component organisms. The question now is, what is the limit of analysis? Are there any primary organisms which are incapable of further analysis? Or is there any infinite regressus? The latter idea is repulsive to logic. For this, Whitehead proposes the 'event' as the ultimate unit of the natural occurrence. This 'event' consisted internally of two patterns, namely, that which preserved its unity, and which formed the ground for making relationships with other possible "events". A primary organism, according to this view, is to be regarded as an emergence of some particular pattern as grasped in the unity of a real event. Such an event has an intrinsic reality as its own "prehension" and an extrinsic reality in the "prehension" of other events. The concept of organism therefore, includes within it the interactions of organisms. The relationships of an "event", Whitehead maintains, are internal and constitutive.

When the theory of evolution made its first appearance, many theologians and religious thinkers were afraid of the menace it created for religion. But in reality this was a confusion of thought, for, the evolutionary theory was a natural enemy of materialism. In materialism matter was the ultimate entity, and there could not be an egress from, or progress of, materialism. For, in materialism there is nothing to evolve. There can be only purposeless and unprogressive change. The concept of an organism, however, paves the way for a thoroughgoing evolution. For, the organism mirrors within it all its past history and the diverse patterns of relations with which it could hold others within it. With such a definition of organism, we could undoubtedly bring the atoms within its purview. In such a conception the environment can be brought within the life history of every organism. The environment is not here looked upon as external to the organism, but by the very nature of the organism the pattern of its relation with the external environment lies already mirrored in it. And on the organic theory the only endurances are structures of activity, and these structures are evolving. It is through the temporal succession that the structural activity is realised. The key to the mechanism of evolution is the necessity for the evolution of a favour-

able environment together with the emergence of any specific type of enduring organism of great permanence. One of the simplest ways of evolving the favourable environment, concurrently with the development of the individual organism, depends on the influence that each organism can bear to the environment, so that it may be favourable to endurance of other organisms of the same type. It is not by struggle and conflict, but by favouring the development of other organisms of the same type that the mechanism of evolution can be best adapted to produce the observed state of large multitudes of analogous entities with great powers of endurance. The environment automatically develops with the organism, and the organism with the environment.

In nature there are not only basic organisms, whose ingredients are eternal objects, but there are also organisms of organisms. Supposing electrons and hydrogen nuclei as such serve basic organisms, then the atoms and the molecules would be organisms of higher type; but when we come to large aggregation of matter, the organic unity fails. It is only by coming to living beings that the definiteness of pattern is recovered, and the organic character again rises into prominence. It is for this reason that the characteristic laws of inorganic matter are mainly statistical averages resulting from confused aggregation. Instead of throwing light on the nature of individual organism, they rather blur them. The only profitable study can be from the molecules, electrons and the individual living beings. But very little is known to us about the life history of the molecules and we have to deal with them only in large aggregates. But in the case of living beings the study can be made under more favourable conditions.

So far there have been two aspects from which the evolution has been studied. One, in which the environment was regarded as supreme and the organism was looked upon as more or less passive, fighting against it, and ultimately those only surviving to which the environment could be friendly. The other aspect is that the organism creates its own environment.

Whitehead's outlook of evolution has much in it to com-

mend it to us. But though it may serve to obviate the difficulty of the gap between the non-living and the living, and though it makes evolution susceptible to an ethical outlook; it does not in the end give any satisfactory explanation to the manifold difficulties of the evolution theory and particularly of the individuality that is displayed by the inner activity in creating the diverse forms of life.

Driesch, the well-known vitalist starts with the affirmation, that the organism is not merely an aggregate of cells, but very much more than that. It is the whole that uses the cells for its own purpose. A cell consists of two parts, the outside or the protoplasm, and the inside or the nucleus, which has a typical structure which suffers changes during the division of the cell. In every nucleus of a cell there is a certain substance which takes stain by which the cell is treated with pigments. This is called chromatin. This also gives an acid reaction, while the protoplasm is basic. It is also the centre of oxidation. When a cell is going to divide, the chromatin, which was diffusedly distributed in the form of small grains, arranges itself into a long and twisted thread, which breaks by sections mostly in equal parts, typical in number for each species and each of these parts is split in full length. A certain number of pairs of small threads called the chromosomes are the ultimate result of this process. In the meanwhile typical modifications occur in the protoplasm, and then by an interaction of protoplasmic and nuclear factors the actual cell division commences. Of each pair of the small threads of the chromatin, one constituent is moved to one side of the cell and one to the other, and thus two daughter nuclei are formed. The protoplasm at the same time forms a circular furrow between them; the furrow gets deeper and deeper until it cuts the cell in two and the division of the cell is complete, and similar further divisions continue in each of the cells and so on. This is the beginning of the development of life. The evolution takes place not by a mere unfolding of what existed already, but one feature is formed after the other (epigenesis).

Weismann held that a very complicated organised structure, below the limits of visibility even of the most powerful micros-

cope, is the foundation of all morphogenetic processes, in such a way, that while the part of the structure passes over from generation to generation as the basis of heredity, another part of it is disintegrated during the individual development and directs development by being disintegrated. Weismann gives several examples, several copies, as it were, of this structure, to be present in the germ cells, and it is to these copies that the word 'past' has been applied by us. At least one copy has to be disintegrated during the ontogeny. The morphogenetic structure is always present in the nucleus of the germ cells. Weismann's copy theory involves the idea, that what appears later as organs and parts of the body, had their copies or patterns in the nuclei, and the evolution of the animal takes place by a sort of unfolding. To this Driesch would not concede. Roux in 1883 advocated a view of morphogenesis resembling the hypothesis of Weismann, in which he held, that a minute ultimate structure is present in the nucleus of the germ, and directs development by being divided into parts, during the series of nuclei division. Driesch thinks that all morphogenesis can be explained by three principles, namely the prospective potency, the means and the formative stimulus. He says that the elementary organs in ontogeny show one and the same prospective potency, distributed equally over their elements. The idea, that he wishes to express, is that the different elements in the cell, all co-operate together equally for the production of the whole. He believes in the autonomy of life. The phrase 'autonomy' signifies being subjected to laws peculiar to the phenomena in question. There is a primary purposefulness, that is, the existence of adaptive processes which cannot be imagined to have arisen on Darwinian principles. The fundamental thesis of Driesch seems to be that there is a life force which is impregnated, as it were, with the concept of what it has to make, and which, therefore, works and directs all the energy, mechanical, chemical etc. for the formation of the morphological structure of the animal in question. He does not deny the operation of the chemical and mechanical forces, but side by side with them, he admits a separate force blindly intelligent which is responsible for the evolution of the different living beings. There is

an inherent teleology in it which guides its destiny. We thus see, that, whenever the reasoning mind finds organic living individuals, it finds objectified active reason or active reason as its object. We have the right to speak of certain constellations other than organisms, which are teleological in the sense of a statical harmony of nature. One state of this statical teleology leads back to an earlier state which again leads back to an earlier state, and so on, each of these states following from the other mechanically. We know nothing about any real entelechian non-mechanical aggregation in the sphere of the inorganic. We may thus view the universe as a purposive entelechy where ordered reason acts in an immanental fashion. From this immanental purposive activity of reason, we may in some sense, have some knowledge of the being behind the scene.

Leaving aside the details of Bergson's philosophy if we turn to his conception of evolution, we can call him a philosophical vitalist. Life from its origin is with him only an impetus, which runs straight through the various forms of life it creates. He says that if the mechanistic explanation of life were true, evolution would then have occurred through a series of accidents added to one another, each new accident being preserved by selection. If this were the case, it would be difficult to explain the different lines of evolution that are found in nature. If life may manufacture the like apparatus by unlike means on divergent lines of evolution, then the mechanistic way of explanation would be disproved. Regarding the relation between the environment and the structure of an organism, some hold, that the former influences the latter directly by physico-chemical means. Others hold that the influence is indirectly asserted by favouring in the struggle of life those representatives of a species, which the chance of birth has best adapted to the environment. The Darwinian explanation of adaptation by automatic elimination of the unadapted, is simply not clear. But its difficulties are insurmountable. It would have to be assumed that the diverse kinds of accidental variations in the different lines of evolution, to help the escape of certain species from the ravages of an unfavourable environment, were arranged by the co-operation of large number of factors apparently without any

cause. Why should causes, entirely accidental, recur in the same order at different points of space and time? No one can explain why this should be the case, and the Darwinian will probably merely maintain that identical effects may arise from different causes. We find that the identical structures have been formed on independent lines by the same accumulation of effects. How can accidental causes, occurring in an accidental order, be supposed repeatedly to have come to the same result, the causes being infinitely numerous, and the effects infinitely complicated. The principle of mechanism holds always, that the same causes produce the same effects.

It is difficult to find any environment that is completely adapted to any form of life. The life always creates and changes the environment to its best advantage. It is difficult to understand why under the same environments two life-forms make two different kinds of preparation for final adaptation. Thus, the two sexes, whether of animals or vegetables, prepared out of the same environment, have two different kinds of sex-apparatus and sex-organisation for their ultimate union in the production. The same common causes have given two different forms of adaptation. If we take again the eye of a vertebrate and that of a mollusc, we find that though there is a great difference in the function and powers of the organs of the two animals, the scheme and the structure of the two eyes are very much analogous to each other. Darwin explained this by very slight variations accumulating together by natural selection, though he failed to explain the different variations in a chain, and the conditions of their accumulation and co-ordination. Bergson holds that the more rational outlook would be to suppose that a new species came into being all at once by the simultaneous appearance of several new characters, all somewhat different from the previous ones. Bateson, the great biologist has also supported this view in his work, and the experimental testimony of Hugo De Vries has supported it in a remarkable manner. If the eye of the man be regarded as a development from the eye of the mollusc by a series of accidental variations, preserved and transferred from generation to generation, how could we assume that the accidental variations could conspire together to develop in

such a harmonious manner as to be of the best utility for the individual. A little variation on the contrary direction might have baffled the whole scheme of the evolution. If the accidental variations, that bring about evolution, are insensible variations, some good genius must be appealed to in order to preserve and accumulate this variation. If, again the accidental variations are sudden, then for the previous function to go on, or for a new function to take its place, all the changes that have happened must be harmonious and complementary, and so here also we have to appeal to a good genius.

We have taken above a brief review of the changes of causes and conditions through which this planet of ours came into being from the gaseous mass of the sun, and how it gradually cooled down, and the land and the seas were formed, and how slowly and gradually life manifested itself, how, again, from the lowest beginnings of life as ultra-microscopic organisms we come to the evolution of man, the highest of all living beings. The evolutionary idea has not been found fruitful in the field of Biology; it has been used in a slightly different sense to explain the changes in the various fields of human activity, such as the development of societies in institutions and the like. The theory of evolution is in direct conflict with the theory of creation by the will of God, which has been accepted as a creed in many religions, particularly, the Semitic ones and also in some forms of Hinduism. With many, God's glory consists largely in the creation of the world and we find in the Book of Job, that God, instead of replying pertinently to the reason for the existence of undeserved suffering and misery, takes shelter in the demonstration of all His might and intelligence in creating this world. If the evolution theory is correct, then God will be shorn of a great part of His glory and it may appear to many that this, to a great extent, shakes one of the bed-rocks of religious beliefs.

There are other religions, however, such as Buddhism, Jainism or the Monistic Vadānta which do not lay any emphasis on any God as a creator, and which regard the creation theory more as a myth than reality. These religions would not be affected in the least by the discovery of the law of evolution as

explaining the origination of the world and the like. Considering the various types of religion that have influenced humanity and have as well advanced humanity, no definition of religion that would regard God as a creating Person, as found in the Old Testament, can be regarded as universally valid. In our approach to religion we reject the idea of an external God, having a physical existence of some sort and as creating the world, as being, in any sense included within the fundamental and universal concept of religion. With us God is spiritual and His reality is attested primarily in the religious experience. Apart from this experience whatever other characters may be attributed to Him on the testimony of holy books or scriptures, may better be regarded as being dogma of a particular religion.

But in our examination of the theory of evolution we have tried to demonstrate the fact that in spite of all that may be said in favour of the theory of evolution as being a plausible explanation of the nature of the world and the various forms of life, that have passed away and are still existing, the theory of evolution can but show us only a small fragment of the puzzling questions, which we are unable to solve on any of its interpretations. First of all the theory of evolution cannot explain why the inorganic elements down to protons, neutrons and electrons should have their activities determined in a particular pattern in which they can be fitting vehicles of life in its various forms. Secondly, though the atoms constituted of protons, electrons and neutrons in their various types of combinations, chemical, physical or electrical, cannot explain the origin of life, yet they form the basis on which the activity of life depends. Thirdly, the concept of life is so unique that the leap from inorganic matter to organic life is beyond comprehension. Fourthly, the development of the various forms of life in diverse lines is so complicated that the theories of struggle for existence, natural selection, accidental variation and heredity are quite incompetent to meet the situation. Fifthly, the theory of accidental variation involves a petitio principii, because it takes for granted what it seeks to explain. The theory of evolution is intended to be a theory which should explain

the various forms of life; if, that variation is grasped within the theory by the acceptance of accidental variation, the fundamental interpretative character of the theory of evolution cannot be said to be fully retained. Sixthly, the hiatus between one form of life and another is often so great that no proper scientific explanation on the lines of theory of evolution has yet been available. Thus we do not know the relation between the plants and the protozoa, or between the protozoa and the multicellular beings, the birds and the mammals. It may be easy to demonstrate the slightly varying structure of horses at different epochs of time, but it has not been possible to explain the evolution of various animals from one another to any important extent.

The contribution of a vitalist like Driesch does not lead us very far. Side by side with the physical and chemical causes that determine the development of a living being, the vitalist admits a supplementary vital force as the regulating principle behind the developing activity. According to the vitalist there is an inherent teleology or entelechy by which the whole as such, determines the parts that are likely to suit the purpose of the whole. But this vital force has to be regarded only as a parallel force controlling other forces that are operating in the germinal condition of life. The theory of creative evolution by the 'elan vital', as advanced by Bergson, is as vague and unmeaning, though the interpretation is couched with much literary eloquence. Again, though much has been done in the sphere of cytology and the study of the so-called gene, and though we know many of the facts regarding the morphology, the division and the multiplication of the cells, our knowledge regarding the grouping of the cells for the formation of the definite structure and organs of any living being is wholly unsatisfactory. We thus see that though the theory of evolution may have provided us with a foggy outline as to how the original events have developed through matter and myriads of life history, the total picture in the evolutionary explanation is not so intensively brighter than the exploded creation theory. It is true that in tracing the evolution of life-history, through various epochs of life, we find that many forms of life, that had reigned over the world, have

been destroyed through changes of environment and other conditions; yet, on the whole, life has been progressive and the material conditions of life have been subservient to the end of the progress of life and its culmination in man. Though the details of many of the biological phenomena may be explained on the basis of the known physico-chemical laws, yet in examining the functions, the structure and the organs of any living body, we find a sort of unconscious purposiveness which is beyond the range of physics and chemistry. In tracing the development of the history of life through various kinds of accidental variation, we find the same type of orderliness which has made development and progress possible. We start from the various kinds of changes in the inorganic world, and we come to a stage where the physical situation is fit for the growth of unicellular life; from the unicellular we pass on to the multicellular and gradually to insects, fish, the reptiles, birds, mammals, anthropoids and finally to man. The instinct of the animals is supplemented by intelligence in man. There may not be sufficient grounds in admitting a personal God who creates the world and its denizens out of nothing, but the study of Biology naturally brings home to us the fact, that we cannot do without postulating some sort of dynamic teleology or purposiveness as controlling the chain of progress from the inorganic to the organic and from the lowest stages of the organic life to its highest development in man. The secret of life is as much hidden in mystery as are the various stages in the development of life. In the same individual life also in the action and re-action of the organs amongst themselves and with the structure, as well as in the diverse manifestation of action and re-action of any animal against its environment, we find that the same type of mutual adaptation and purposiveness finds its scope both in the maintenance and reproduction of life.

The struggle for existence and natural selection have been regarded as the two most fundamental principles for explaining evolution. But we have seen that co-operation and amity have also gone a great way in stabilising life and in improving its facilities. Natural selection acting on an adapted species in a constant environment may be expected to stabilise rather than transform. Thus, in the nearly constant environment of the sea, many an-

cient species survived, and appeared to be very stable. Evolution in the sense of full transformation of a species cannot be applied to anything that is known to have happened to the human race since the earliest permanent agricultural settlement as about 300 generations ago.

Throughout the history of evolution, changes of environment and aggressiveness between different types of animals, as well as the common fight for procuration of food, and such other causes, have been regarded as being responsible for structural changes and transformations through a long series of generations. But in the human level, though there is a considerable amount of aggressiveness there has been a good deal of social feeling of friendship and amity throughout the long course of human history. It may also be pointed out that in spite of the element of mutual aggressiveness and struggle for existence, there has practically been neither any structural change nor any change in the nature of the organs. Judging from the previous role of the history of evolution, we may naturally feel assured that man or the homo-sapien is not destined to be extinguished from the face of the earth or changed into some other form of being, unless there is any great environmental change or any change in the nature of its bodily or organic structure. How then, one may ask, is the tendency of its aggressive nature as manifested in the struggle for existence is to be compensated for its own benefit. The intelligence in man, which distinguishes him from all other animals, is indeed a weapon of supremacy against all other living beings. But as applied within the human race, it is both a weapon of supremacy and of destruction. In recent times man's discovery of the secrets of nature, and his utilisation of its power for his own end, have been so great that the destructive power of man is almost becoming boundless.

If intelligence in man is not the compensating element as providing against self-destruction, with what instrument has nature provided him, so that while preserving himself from the depredation of all other animals he will be able to preserve and maintain himself from the hostilities of other members of his own kind? We find here that in the human level two types of urge have emerged which are entirely absent in sub-human level.

These are the religious urge and the socio-ethical urge. If man is not to be wiped out from the face of the earth through a spirit of aggressiveness, this can only be done by developing his religious urge as also his socio-ethical urge.

In the earlier development of human societies, the religions and the socio-ethical motives had pulled together the different elements of particular societies or races into solid wholes, and had enabled them to stand against the aggression of other societies or races. With the advancement of knowledge and facilities of inter-communication, races and societies living apart, came together and were engaged in their mutual struggle for existence and betterment in more or less the same fields of operation. Thus two other motives, the political and the economic became welded up with the other two motives, and as their force increased we find societies developing into nations. We are now in the national level where national struggles for supremacy and exploitation have developed so much that all nations are threatened with destruction. If the compensating motives of the socio-ethical and religious types cannot get the better of the political and economical motives, if nationalism cannot interpret itself in terms of inter-nationalism, or, in other words, if the socio-ethical and religious motives cannot be made to outgrow their national or racial limits, the whole human race may be threatened with destruction.

The different religions that are fenced in with various kinds of dogmas, creeds and rituals cannot very well play any international role. The creeds and the rituals may still remain there as vestiges of their ancient history, but all right-thinking men should, at the present level of our civilisation and culture, try to differentiate the essential common element of all noble religions as a spiritual experience that is enjoyed in and through our socio-ethical urge. At this stage obligatoriness of moral duties is enriched and perhaps transformed to some extent by spirit of friendship, charity and justice, which supply an emotional reason for all morality. Even in the biological field it is the spirit of love that transforms egoism into altruism. The spontaneity of love and charity acts in a smooth and natural way and transforms self-sacrifice into self-satisfaction.

We thus find that religion is not merely a matter of personal and private experience or a guarantee for a utopian condition in our post-mortem existence, but it has an objective and pragmatic value in the life of man, here on earth. 'Love thy neighbour' is one of the principal tenets of Christianity and may be said to form its very core or essence. When societies were limited to a city or a country, the limits of neighbourhood were narrow. But in modern times facilities of communication have developed so much that the limits of neighbourhood have extended to the entire world. It takes as much time to send a message from one city to another city of the same country as it takes to send it to the farthest end of the world. Through air, land and sea, communications have so advanced that the whole world may be regarded as one great country. Thus ethics or morality which formerly had only a social basis, now demands to have an international basis. All nations, are our neighbours; any disturbance in any part of the world is likely to upset the peace of the rest of the world. The economic motive of exploitation or the political motive of sovereignty, which gave vitality to the 'Nation' ideal, must now be forsaken for the sake of peace and happiness of every nation. From the primitive life of clans and hordes we come to societies and from societies we come to nations. The experiment of nationalism was attempted in various forms such as fascism, national-socialism, state-capitalism, despotism and democracy. Many of these forms had shown signs of great power, but their internal weakness led to their collapse. The democracies to-day are also showing signs of decay and the glory of imperialism is being threatened with the possibility of extinction. Diplomacy these days, in spite of the League of Nations and the United Nations' Organisation, seems to be nothing more than mutual bargaining in the interest of the stronger nations. The result is mutual distrust and the danger of another world-destroying war. The Russian revolution wanted to start a class-less international state; but in trying to fight the other nations it is gradually shifting its ground and showing signs of tending towards nationalism, territorial expansion and obvious imperialism.

Our only escape is to re-educate the generations that are to

come in the language of a new freedom which is to be the freedom for all and the goal of which should be the attainment of the well-being of all. The social ethics that limits the scope of duties only to the members of one's own nation must prove a veritable failure. The British are a people who have a long history of democratic institution and in their own country they display a great amount of fairness and justice. But when India passed into their hands they proved to be exploiters of the country. If they could love India or the Indians as they do love England and the English, India would have been integrated and bound with England in bonds of love which would have been the strength and glory both for India and for Britain. But their failure to follow the essential instructions of Christianity so embittered their relation with India that they have now to quit her and leave her alone.

Love, charity and justice are the essential principles of all advanced religions. In order that morality may transcend the limits of a society or a nation and become universal, it is necessary that it should be instilled with a positive stimulus which comes only from religion accepted in its true sense.

Official Russia, after the revolution, dispensed with religion, regarded religion as an opiate for benumbing our reason to sleep But, if we go deep into the Bolshevik or the revolutionary Russia we find that the organisers of the revolution achieved some notable results towards stimulating the minds of the people regarding certain important objective ideas of religion. Thus they succeeded to a large extent in demolishing all ideas of racial difference and differences arising from the different religious creeds. They were prepared to ignore the difference between the rich and the poor. They could think in terms of international humanity rather than of narrow nationalism. The political power remained no doubt in the hands of the minority, the communist party, but they could treat all people of the U.S.S.R. in terms of equality. To regard all people as equal has been regarded as the essence of the worship of God according to Hinduism (*samatvam ārādhanam acyutasya,* vide *Viṣṇu-purāṇa*). They succeeded in arousing a frenzy of emotion in

favour of this idea and they trained the people to regard the Bolshevik state as a god which they must obey and love. Fear and love, the two important elements of religion in the human mind were thus exploited in favour of the deity, the Bolshevik State. Instead of an image, or a metaphysical essence, or a formless personal Being, we have here the body politic, the state. Thus the very denial of religion led to the formulation of beliefs which for all pragmatic purposes served the purpose of religion, even better than in a country, where there was a formal allegiance to God, but it was contradicted by an external behaviour that indulged in the sense of superiority and inferiority amongst people on diverse grounds. It is true, no doubt, that the ideals of revolutionary Russia slowly and imperceptibly are tending towards State Capitalism and nationalism. But if it does so to any considerable extent, it will be a great disruptive force in near future. The reason why the ideas of communism are spreading in all countries is not the force of propaganda, but the great religious truth that the revolution gave birth to. Wherever in capitalistic and imperialistic nations there are inequalities and injustice, domination and aggression, the revolutionary ideal will find its allies and votaries. A better England and a better America with the ideals of equity and justice, freedom from the spirit of aggression and the spirit of treating humanity with a sense of equality in giving equal opportunity for freedom, peace and happiness, will raise a bulwark of peace and prosperity which cannot be attained by bargainings of cleverest diplomats, in hundreds of meetings of the United Nations.

The lesson that we draw from our study of Biology and the theory of evolution is that the evolutionary process is a process of progress. If, in the level of man, the aggressive spirit cannot lead to the evolution of a better species of beings through natural selection, there must be some way in which the human level must be saved from destruction and should make a progress in social, intellectual and moral lines. It is for this purpose that man has been endowed with a religious and a moral faculty which must perfect humanity through conflicts and contests. The vision of conflict and destruction is but the vision of a part of a circle. The other part as gradual perfection

through cessation of hostilities and mutual co-operation is yet to come. We have shown above that struggle for existence leading to higher evolution is not always through elimination of the weak even in the animal world. Even in the animal world co-operation and amity have been found to lead to the maintenance of the race and its development.

The findings of the biological investigations do not lead us nearer the solution of the mysterious puzzles of the phenomena of life and consciousness in its different levels. The query as to how the first spark of life appeared, and the different stages of intelligence and consciousness evolved in their varied forms and capacities, remains unanswered; also the transition from one form of life to another specific form has remained unsolved. The discovery of details in the process of evolution has not been able to rule out other alternative theories such as that of creation. The evolutionary process does not necessarily exclude the latter, while there is nothing to prevent another hypothesis to be held, in which evolution may be taken as a special technique suited to the process of creation through different stages. Whatever may be the values of relevant alternative theories and speculations, one point seems to be reasonably established, and that is this, that all through the different levels of evolution, notwithstanding their varied characters and capabilities, there has been a steady progress in evolving richer and higher form of life and mind. The emergence of newer and broader concepts of values has characterised the different levels of consciousness; self-regarding impulses have given way to other-regarding ones, biological interests and desires have been replaced by aspirations, anti-biological in nature. The earlier phases of life and consciousness have helped the emergence of newer planes which, while depending on the previous ones, have revealed a novel and higher and richer arena of life. This being so, the investigations of biology have led to one great result, viz., the discovery of the emergence of higher human emotions and values out of the lower, of purer and brighter radiance and moral excellences out of the mere animal desires. The true essence of religion and morality lies in the unfolding of the sacred and soft petals of human heart in the beauty of dis-

interested and purest love and sympathy, a spirit of undying faith and hope in the superior order of things, the broadest outlook on life which shows itself in harmonising the different values in a hierarchical order, so that life becomes worth living and ideals worth striving for. If we have a look into the lives and workings of great men, saints and seers, we find the same undeniable truth, that each one of them lived for one object, the transformation of all ordinary values into those of a wider and purer ones; each one of them showed the irresistible and unshakable conviction that egoism has to vanish before altruism like darkness before light, hatred and jealousy and all mean and cringy conflicts of passions and instincts have to melt away before the sweetness of love, kind and loving consideration for all fellow-beings, and all ties of worldly interest have to give way to the deeper and intuitive glimpse of a world beyond. That the ultimate end of life is realised in transcending and transmuting the stages it passes through, is the lesson we derive from biology, and this is the secret of religion as well.

The contribution of a study of the science of biology thus helps us to strengthen rather than weaken the religious and moral beliefs which come as a crowning achievement of life and consciousness, and shine out in glory and with a unique spiritual beauty in man—the ultimate product of art of Nature, in its long process of creation.

CHAPTER VI

PSYCHOLOGY AND RELIGION

Our review of the cultural enlightenment of the modern times in the way of anthropological studies, and the development of the new philosophies of physics and biology has shown that there is nothing in them which can shake the validity of our religious experience. But it cannot be doubted that the enlightenment of the modern age has so opened our eyes that none of the older religions with all their dogmas and creeds, rituals and rights can be regarded objectively true. The principle of evolution is being used to-day by the modern man as an organon in every department of our lives. When we study psychology, we also study along with it the development of the human mind in the child-state and also as far as possible mind as such in the animal state as well. Whatever may be the ultimate cause, we find that from the very period that mind has shown itself in the living world, it began to manifest its nature. In the very first stage of the unicellulor animal where there is no nervous organisation and where under ordinary ways of interpretation we cannot affirm the presence of mind we find a peculiar phenomenon called behaviour. The movements of a rolling stone are completely determined by its momentum, and the circumstances, but there is a little unpredicability in the way of the behaviour of most living creatures. There are indeed uniformities of sequence in the reactions of the organism but there is an undeniable appearance of unpredicable freedom. When we watch, for example, the Brownian movement in a glass of water with a microscope, the minute granules in the water are jostled to and fro probably by the invisible ions which strike against them. But if we put in it some vigorous unicellulor animal, they are no longer affected in the same way, but they command their own course. The creatures here behave as an agent, and exhibit a correlated and

concatenated series of acts bound to show a definite result favourable to the continuance and harmony of the vital processes. The animal organism has various kinds of movement muscular and nervous as the case may be, including irritability, which keep on working for the functions of nutrition, circulation, respiration and excretion. These functions are the preconditions of behaviour. Biologists differ in their opinion, as to whether animals possess any mind or not, and some of them feel satisfied only with physiological interpretation; there are many psychologists and philosophers who deny mind even as regards man and think that they can explain everything on a physiological basis. The fact is that every animal learns by experience. When an amoeba is thrown into a glass of dirty water, it moves its pseudopodia in all directions in search of food. Accidentally when the pseudopodia meets the food for a few times in a particular direction, the animalcule directs its movement towards that direction. Somehow the previous experience of meeting food in a particular direction is registered in the animalcule, and this prompts it to direct its movement in that direction. This has led many to ascribe mind to the animals; thus Hume said "No truth appears to be more evident than that beasts are endowed with thought and reason as well as men". The point is difficult of solution, for we cannot regard the hive-bees, that make the honeycomb, as mere automatic machines nor can we regard them as expert geometricians. Every statement, that another being possesses psychic qualities, is a conclusion from analogy, and not a certainty; it is a matter of faith. It is difficult to prove that any of my fellow beings has any mind, for we have no direct experience of the mind of others. That they possess minds is only a working hypothesis. The amoeba encounters the hurtful stimulating influence affecting a part of the cell and it at once withdraws from the stimulating power and strives to move in a new direction. If the new direction of movement leads to further stimulation, a new trial is made, and such efforts are repeated until the amoeba can get beyond the zone of danger. Jennings says that if the amoeba were a big animal, its selective action would be comparable to that of a dog. If the amoeba has no mind, it has to be admit-

ted that its physiological apparatus is such that it can give us the impression that it has a mind. Nowhere else do we find in the inorganic zone of nature any such arrangement that can induce a selective activity. And what is true about the amoeba, is also true of many other unicellulor animals. We see here the beginning of exploring, testing and actual hunting; and the enregistration of particular reactions to stimuli and organisation of behaviour that is economical and life-saving response. We also see here a selection of reactions, the application of the principle of trial and error, for its own well-being. When we come to those animals, which have a nervous system, we find more advanced reactions in the way of reflex actions. These reflex actions are uniform reactions to a particular kind of external or internal stimulus. Reflex action involves (1) the receptor of a stimulus—the sensory and receptory nerve cell from which impulses pass into the central nervous system; (2) a motor nerve cell which connects the central nervous system with a muscle or a gland; and (3) between these two a communicating or associative nerve cell connecting them within the nervous system. The receptor neuron has its cell-body outside the nervous centre and the motor neuron within the nerve centres sending a nerve fibre to some peripheral effector organ. The associative neuron connects the two others and thus the reflex arc is formed which is the basis of nervous reaction. In most cases there are more than one reflex arcs which are interlinked. The sea-urchin has no nerve ganglia, but the nerve reflexes are perfect. If a sea-urchin is thrown upside down, it does not move in the inverted position as it might be expected to do, but at once by a special movement of its spine, it comes to the normal position. This proves that the nerve reflexes do not act with wooden-like automatism. These reflex responses are often connected with the physiological system. One of the clearest results of modern studies of the behaviour of the lower animals is that the reflex actions are largely dependent on the physiological state as a whole, which again depends, in part on history and experience. It is all well-known that experiences can be registered even when there is no nervous system. If a reflex be an invariable reaction to a given stimulus, then there

is much more than that in the behaviour of the lower animals. Jennings says that each stimulus causes, as a rule, not merely a single definite action that may be called a reflex, but a series of trial movements of the most diverse characters and including at times practically all the movements that the animal is capable of. Even the ganglionless animals show a trial and error method, a selection of the responses that put things right for a while and which shows profiting by experience. If this is not intelligent behaviour, it is at least a counterpart to it.

But the behaviour of bees, ants, wasps, birds and mammals show a complexity which can very well be compared with intelligent actions. A chick, reared in an incubator in the laboratory, does not know what water is even if it is standing near it, but within a short time it knows all that it should know for the maintenance of its habits. Prof. Jung took 20 bees in a box into the country about 6 miles off from Geneva of which 17 returned. Some birds taken 850 miles off into the seas they have never visited, return safely to their nest. It is said that the Yucca moth goes to the Yucca flower for a single night and collects the pollen, kneads it into a ball and carries it with its head, and takes it to another flower, pierces the pistil with her ovipositor and lays her eggs among the ovules, and then places the fertilising pollen ball in the funnel cell-opening of the stigma, by which the flower fertilises, and the larvae of the moth, deposited in the ovules, eat a part of the ovules and become developed. Thus the moth and the Yucca flower mutually serve each other; but Lloyd Morgan says that this is done only once in the life time of the moth without any knowledge as to the meanings of its behaviour. It is the nature of the instinctive behaviour that there is no trace here of any acquisition by experience and even the most complicated action is done with perfection. It is generally held that the instinctive behaviour is extremely rigid, but careful observation has shown that in spite of unity of pattern, there is a good deal of individual differences. Lloyd Morgan says that instinctive behaviour is that which is on its first occurrence independent of prior experience, which tends to the well-being of the individual and the preservation of the race, which is similarly performed by all

the members of the same species, by more or less restricted group of animals, and which may be subject to subsequent modification under the guidance of experience. Such a behaviour is a more or less complex organic or biological response to a more or less complex group of stimuli of external and internal origin, and it is as such only dependent on how the organism and specially the nervous system and the brain centres have been built, through heredity under that mode of racial preparation which we call biological evolution. An instinctive tendency should be distinguished from an instinct in this that while the instinct may lead to the accomplishment of a complicated course of action, instinctive tendency demonstrates only an impulse impregnated with feeling towards a particular direction.

There are various theories of instinct, some limiting it to reflex actions which are non-cognitive hereditary predispositions, others regarded it as quite inseparable from intelligent behaviour; and there are other theories that hold instinct and intelligence as co-operative kinds of knowing. Others again, think instinct to be physiologically akin to reflex actions consisting of concatenating reactions of the whole organism, fixed in a rigid routine and without any previous awareness of the end towards which the actions are being directed. Others, again, like Bergson and Carr regard it as a direct vision of reality jumping over the intellectual categories. Bergson thinks that the instinctive and the rational are different in kind being two different approaches, and not a power of the same type varying only in degree or intensity. Instinct is static, while intelligence develops. There is also a difference of opinion as to whether instinctive actions are conscious. But intelligent behaviour is found in the action of the beavers and the chimpanzee, and this intelligence consists in imagining a situation in future and contriving the intellectual apparatus to arrive at the desired situation. It is well-known what aptitudes of learning are shown by dogs or cats or monkeys. Hobhouse says that instinct is a product of evolution and it cannot be resolved into a form of intelligence. Its evolution is merely an aspect of the evolution of structure. In the case of mechanical instinct it is the reflexes that show themselves in instinctive behaviour, but true instinctive be-

haviour is guided by persistent interest in the service of which, action is adapted, and which in varying degrees responds to the situation as a whole. Pure instinct employs the reflex and sensory motor actions for its own realisation. Intelligence proper arises within the sphere of instinct operating in narrow limits. It is fòr this reason that when an animal appears stupid in a particular direction, it may appear quite sagacious in others. At the point when we are able to grasp the entire meaning of action, we foresee the end and determine the means freely without reference to any hereditary propensity to a specific mode of approach. We pass out of the region of instinct and enter that of intelligent purpose. Intelligence thus means a correlation of experience or action effected by the individual within his own life history. It needs imagination or formation of images to project them in the future and to adjust their relations for effecting desired service. It involves a tension, assimilation and expectation.

There is a mass of evidence in favour of the view that animals can learn by experience. They also appear to draw inferences from one object to another. They also know an object as a concrete whole and as a centre of many relations. But the apes in general appear to be more developed. They are able to claim originality by the application of experience and some degree of forethought in imagining a complex situation and creating that in practice. But conceptual thought, the formation of personality with its abiding interest in self and others and in organised society begins with men.

The point, that I have been striving to express in discussing about behaviourism, the development of instinct, intelligence and mind, is to draw our attention to the fact that out of the chemico-physical relation of inexpressible and undeterminable subtle denominations of force or its counterpart, whatever it may be, there arises an entirely new group of phenomena which pass by the name of life. Life is not a product of matter, it is original in the sense that its concept does not arise from the physico-chemical concept which forms an integral part of it. In the zone of chemico-physical reaction there arises a new unity which comprehends within it

activity, structure and environment. It is for the first time in life that we find finite individuality that passes its finitude. If we take a grain of gold, we can state exactly how many atoms it contains and the amount of energy that it possesses and the various reactions that it would give to various elements in its own environment under proper conditions. It has no power to behave in any way that would baffle our mathematical computations. Whatever is there, is finite and limited and no atom of gold can take anything within it without ceasing to be gold. In spite of its activity, potential or actual that may lie within it, it is absolutely limited and it has no means of taking anything within it or of being a part of anything else without entirely annulling its own concept. If we take any alloy of, say, gold and mercury, it would have no more value qua alloy except the amount of gold that we may gain out of it, by any chemical process. The gold has lost its value by taking something else and including it within itself, or by getting itself included within another thing, say a handful of mercury. The gold therefore, is bound in its finitude. It cannot go beyond itself and cannot create any energy by assimilating anything within itself while remaining gold all the time.

But in the case of life a reversible phenomenon occurs. The part of the environment that any organism takes in, no longer remains outside of it, as an abstract environment. Nor does the organism lose itself in the part of the environment, that it has assimilated. On the other hand the part of the environment that is taken in by the organism becomes a part of the organism itself. The structure of the organism is not separate from the life, but through every particle of it life is saturated as it were. In every assimilation and every reaction or response that it gives to its environment, be that an inanimate substance or another organism, it realises its own nature within itself. It is the function of an organism to expand itself at the cost of its environment and after expanding itself in that direction it can give off or secrete any part of the environment over which it had extended its activity. Thus the finitude of life transcends itself by assimilating the environment and adapting itself to it. As there is no end of such processes, it never dies.

Thus we have here an entirely new conception of finitude that transcends itself in a reversible manner. To give another example, an organism has such a system of reflexes within it that when it meets another object living or non-living, it gives a response. This response is primarily response of subjective reflexes. The organism imagines within it, its opponent or friend and lets loose its inner activity and the mechanism of the reflex in such a manner that before it has produced any objective change in the friend or the opponent, it has undergone a change in itself. In the case of the organisms which have developed an eye this inner change takes place at a distance which may be fairly long. In the case of animals like man, which have developed a mind, the change can take place even when the object is absent in the environment. The relation of activity, that would have started with the concrete object by grasping or trampling it, is reversed in the organism itself and whether the organism produced any change in the object or not it changed itself. Again, when the organism assimilated a part of the environment, that part lost its continuity with the environmental sphere and had its relation with it so reversed that it became continuous with the life activity of the organism.

Relations are difficult to be defined. They are supposed to exist, between two relata. In the concept of life it is difficult to discover any terms which may be called relata. Life is a unity which is hardly interpretable in terms of relations. An organism has its own specific structure, the organs and limbs, all internally related together in a functional way in a purposive manner; but these are all integrated in the operation of the life. That operation is not by itself determinable. It is only determinable in the effects that are produced and maintained. In multicellular animals, the old cells are destroyed, new cells are produced, structure is formed, decayed and maintained and the functions of the various organs, the pressure balance of air, carbon dioxide etc., are kept in consonance with the various secretive operations and the operations of assimilation. But the life principle itself is so absorbed everywhere and so transcends the absorption that the nature of the relation, by which the unity can be understood, is beyond our comprehension.

Life is no doubt a whole, but it is not a mechanical whole. It is therefore, impossible to determine any priority or posteriority in the course of the operations that manifest the life, in a series of concatenated operations and processes. There is nothing that may be regarded as starting the series. We only find that a relation of purposiveness goes round the processes in a cyclic manner and all together show the manifestation of life. Moreover, as far as we may determine the functional output of any organ of the organism, we cannot determine the sources from which that particular organ derives its functional importance. The functional importance of any organ such as the kidneys, depends as much on the kidneys as on the heart and the liver as also on the lungs, the phenomenon of aeration as also on the quantity and quality of the food intake, history of the organism, the original functional value of the life impetus as well as the environment. Thus if the functional value of an organ be symbolised as A, this A depends as much on the functional capacity of that organ as on all the rest of the other factors. It is now a familiar fact that the essential feature in the act of breathing is the absorption of oxygen and giving up of carbon dioxide, and that the maintenance of this, and of the structure involved in it, is not only essential for the production of heat and muscular activity, but for the maintenance of nervous activity, consciousness, assimilation, secretion and all other bodily activities. It is also well-known that the structure of the lungs together with a sufficient flow of blood through them is necessary for the exchange of gas. But not only does their function depend on a suitable supply of oxygen, but it also depends on the bodily structure. If the oxygen-supply to the brain and various other parts is shut up completely for a short time or considerably diminished for a longer time, various structural changes are produced, and these changes may arrest the respiratory function. Similar changes may appear to be produced by excess or deficiency of the carbon dioxide. Thus the activity expressed in breathing, the structure involved in it, and the relation of the activity and its structure to the environment form one chain of the maintenance of activity and structure in which the life of an organism is expressed. In this chain it is

impossible to determine one to one relation beginning with any term in the series. Thus at the level of life, which being finite is also infinite there are no relations which are not reversible. The bones and muscles involved in limb movements have not only been developed into the particular arrangements, but the organism is maintaining them in an efficient manner from moment to moment, hour to hour and day to day. The changes that occur in a muscle are followed by reproduction of the muscular substance. The formation and liberation of the digestive ferments are minutely regulated. The phenomena of a living body cannot be understood in their proper relations unless we already assume the principle of life which holds within itself all the purpose and development for which the organism stands. Here also between the structure of the organism and the life principle as cause and effect the relation is reversible, for without the structure and function the life principle is nowhere and without the life principle there is no structure or function. The mechanists assume that through a long process of natural selection, mechanisms themselves are capable of maintaining, repairing and reproducing themselves. No mechanistic idea can, however, explain the function of reproduction. The nearest approach to reproduction in the inorganic field is the formation of crystals. By increasing the pressure or adding heat we can dissolve the crystals away and by taking water below the freezing point and adding a little piece of ice crystal we can have the ice crystals formed in. The molecules of water by attracting one another can arrange in a geometrical shape and accumulate together in a crystallised form. But when the crystal is formed, if it gets material, i.e., water, it continues to grow on. But the organism maintains itself through a balance between loss and gain, whereas a crystal only grows or melts away. There is also no internal work of functional activity in crystals as we find in the organism. As we start from the inorganic to the organic, we find that the nature of chemical reaction changes its mode. Whereas in inorganic chemistry only the atoms can combine with atoms and all reactions are through atoms only, excepting the case of a few radicals, in the organic field molecules may themselves combine directly with-

out going through the atomic stage. Here the molecules themselves behave as atoms. Sometimes a molecule may be formed with such countless atoms of which we can have no idea from inorganic chemistry. The result is that we do not even know the chemical composition of most of the protein bodies. About the behaviour of an organism we can only predict by actual observation and induction. The organism is not in the environment as a stone may be in a box, but it continually modifies environment and makes it suitable to itself by its action. Thus the plants prepare their food from the mineral matter of the bed, through which they had sent forth their roots. We have not the slightest idea as to how the roots may affect the chemical changes. The environment and the organism form together one whole, such that the environment in contact with the organism becomes charged with certain characters and chemical actions take place between them in such a way as is not normally available in the laboratory. We cannot therefore, say how in the case of such a transformation of the inorganic into the organic, which of the poles starts the reaction. In the bodies of animals also secretions from glands, which are chemical compounds called enzymes (the nature of which is very little known to us) take place, and in the presence of the secretion of endocrine glands, otherwise also called hormones, various chemical reactions take place in the body, though these secretions act only as catalytic agents and do not take part in the compounds at all. The secretions of these glands have not only an action on the general metabolism and catabolism of the body, but also on mental efficiency in various directions. Associated with anger, fear and the like, secretions automatically take place from the glands to maintain the due harmony of the body and the environment. Suppose a man meets with a cobra just in front of him, the idea of the cobra and its bite, associated with the dangerous effect that it may produce, starts the unconditional reflex of the body for an unusual leap, and to make the leap successful, there is an immediate secretion from the adrenalin glands raising the blood pressure of the body. Here also we see that the accommodativeness of the body and the immediate signal from the environment is such, that there

is no need of any action from the environment so to speak. The mere visual image of the snake, false or true, makes the desired accommodative changes, for the changes take place even when there is no actual snake and when there is only an illusory perception of it. We thus see that the accommodative changes in the body take place in a cycle, the centre of which has to be placed not in the environment or in any of the organs or functions, but in the very fact of life itself. Similarly by pathological secretions of the body, proneness to illusions and hallucinations may be effected. The whole together makes a circuit of which the centre is unavailable. The relations from one side to the other and vice versa is automatically reversed.

A study of the behaviour of the living organisms point clearly to the conclusion that in each detail of organic structure, composition and environment and activity there is a manifestation or expression of the life of the organism regarded as a whole, which tends to persist. It is this manifestation which distinguishes biological phenomena in each case, determining metabolic and catabolic functions in the living organism, its maintenance, death and reproduction. It is only by a special conception of the category of life taken as unique in itself that we can understand the phenomena of life.

But as we come to higher animals, we have the play of instinct, intelligence and consciousness as separate factors, by which they can react against the environment, avoid and neutralise them and take advantage of them. They adapt their behaviour in such a manner as to maintain themselves in the presence of what is outside the mere organic unity of their life. Biological interpretation of animal life becomes more and more complex as we rise in the scale through instinct, intelligence and consciousness. The reaction between a conscious organism and its environment is wholly different from the immediacy of what we interpret as physical or physiological reaction, in which the reaction is blind. A psychological object now appears in dynamic relation with other objects surrounding it, transcending local space and time. It has therefore, an element of spacelessness and timelessness, as it is in direct relation with things that are in past and future and also in indefinite space. As

soon as consciousness arises or even when the instincts appear, the whole purview is changed.

As life is an independent unity based on physico-chemical relations, so mind, together with all conscious, emotional and volitional phenomena, is a separate unity or entity, whose laws of behaviour are entirely different from the behaviour of an organism viewed merely as living. As life is a separate category of unity based on physico-chemical relation, which it induces and transcends, so the psyche is another category which is not only based on life, but also on the physico-chemical relation that is inspired and controlled by life. The fundamental difference between psyche in its higher form as a mind and its lower form as animal intelligence is, that while the sphere of operation of the animal intelligence is based on immediate present or immediate future and is almost wholly connected with the immediate preservation of the self or the organism and its race, the psyche in its developed form passes on to spheres which are timeless and spaceless and is not merely connected with immediate self-preservation and race preservation, but it arranges for the same in the future, as also its activities are not limited merely to these. With the development of language and the power of communication, there grows through it the power of detaching ideas from concrete perceptions and recombining them, which is precisely the point in which the animal language and baby talk fail. But from this stage, language advances amongst the human beings and forms general conceptions which rest on cross-correlation of the perceptual order, and are the foundation of universal judgments. Through them thought explicitly recognises the necessary connection, which is the real basis of infinitude in knowledge and, therefore, deals with experiences past and future, and builds up the world of ideas. Thought, therefore, transcends itself in an important manner as nothing else does. Along with the development of thought there grows the conception of personality with its abiding interest in self. In the lower stages personality is mainly associated with the body. In a somewhat higher stage this personality takes an animistic character, which explains the totemistic beliefs, and beliefs in spirits and ghosts

as also in the various perils that the soul may have to undergo. It also explains the various religious beliefs for the welfare of the soul consistent with such convictions. In the later stages, however, the notion of self becomes clarified and expresses itself in the development of a moral and spiritual personality. The story is told in the Upaniṣads that when Virocana and Indra approached Prajāpati about the notion of the self, Prajāpati dismissed Virocana by communicating to him the lesser knowledge of the self, namely, the Self was nothing but the body of the man which one sees reflected in water or mirror. The next teaching of the Self to Indra was that the self was that which one saw in dreams or dream-experiences. The last and the final instruction was that the Self was the spirit as pure consciousness.

On the basis of conceptions of the universal and the individual, there are built the distinctively human thought-products of creative imagination, morals, religion and science. Psychologically the difference between this and the lower stages of development is one of degree and clearness. This is manifested in the emergence of conceptual thinking, self-consciousness and will. In the moral field conduct is directed to comprehensive ends and standardised, and made subject to general rules. Tradition here becomes fused with instinct as the basis of conduct. By an advance of scope and articulation of thought, as Hobhouse says, we arrive at a higher level, and permanent elements of experience, past and future, are welded up with individual and racial peculiarities. Mind appreciates the goal of its development and the conditions and possibilities of its spiritual life. This involves an ethical development in which the principle of the unity of the species, or of all living beings as such, overcomes the lower individual self-assertion. Of course, it is true that in the animal world also there are both egoistic and altruistic tendencies. But these are only realised in an instinctive manner. In the ordinary life of human beings, where life is not controlled by consideration of conceptual thinking and by the dominance of higher emotions of life and sturdier will, instinct often gets the upper hand and man's behaviour is prompted by animal intelligence and instinct, concerned only with the immediate preservation of self in the lower sense.

We have seen that the fundamental characteristic of living organisms manifests itself in a purpose for the maintenance or preservation of life, and that all its activities are comprehended within that purpose. But in the case of inferior organisms the scope of the self-maintaining effort is largely limited to immediate environments, and in this, the organisms are urged either by objective or by internal stimuli, as in the mating season. But with the development of mind, acquirement of language and conceptual thought, the interest of the individual is no longer limited merely to the preservation of the body and prolongation of the race; it extends to ideas and images, beliefs and convictions, which the individual may think to be as inalienable as his bodily self. In the case of a civilized man or even primitive man of some advancement, the self-asserting activity becomes idealised. A patriot, for example, is not so much interested in maintenance of his body from physical attacks as in the maintenance of the idea with which he has identified himself, say, the freedom of the country; and with all the power that he can command, he attempts to preserve a forward urge, for realising his particular idea or ideal. A complex of beliefs or ideas, say, the advancement of learning, the attainment of fame, the freedom of the country and a spotless character may take such a shape in his mind that that may appear to him to be the most inalienable possession and the object of his dearest solicitation. It is dearer to him, and its preservation is a greater concern to him than the preservation of the physical body. In the story of Kālidāsa in the Raghuvaṃśaṃ, the King Dilīpa was prepared to sacrifice his body rather than allow the cow under his protection, to be molested by the lion. The primary conception of the warrior race, and particularly of a king, was to protect those who seek refuge, at any cost. The king replied to the lion that since the crisis was such that one of the bodies had to be sacrificed, the lion should better show him kindness by taking his mortal frame and protecting thereby his existence in fame. He further said that men like him do not show much concern about the loss of the physical body. The story illustrates the most important characteristic of a cultured man. The mind can, by its own ideas and images, beliefs

and interests, emotions and ideals, create a personality which is as substantial as any physical body can be. These mental creations differ from the creation of the living body in this that they are not composed of cells which directly nourish themselves by physico-chemical means and whose scope of activity is objectively limited to the immediately surrounding environment. It is true, no doubt that the mental functions also depend on the due harmony of catabolic and metabolic processes. It is also true that the secretion of the enzymes, the circulation of blood, its pressure and temperature, the nature of aeration in the lungs, the proper excretion of the waste product and the power of due assimilation have a great effect on mind. But be that as it may, that effect is so different in kind from mind and mental processes, that the two cannot be related together in the same way. It may be true that if the gardener digs at the root, pours water regularly, removes the canker and destroys the poisonous bacilli of the soil, the tree may yield the most perfect magnolia flower. We cannot deny the utility of the gardener's efforts in the direction of the soil improvement, but even then we cannot regard the magnolia flower to be merely the product of the soil. The soil is, no doubt, the most indispensable condition of the flower, but still the flower has a meaning and significance, all its own, which far transcends the mere usefulness of the soil for the blossoming of the flower. The development of mind has thus to be regarded from an entirely new point of view from which life could be looked at. While the unity of life is a mere unconscious unity, which life tries to preserve and maintain through continuous conflict of responses, outer and inner, the mind feels in itself through all its various creations and abstraction, a concrete unity and personality which is the most vital concern for itself. Everything else has appearance only in consciousness; and truth and falsity are also subject to the verdict of consciousness. No doubt, the mind receives sensation from the external world to which the body belongs, but these sensations are ordered and harmonised by the concepts of space and time, cause and effect, relations, substance and attribute, action and passion, affirmation and negation, universal and particular and in other ways. None of these cate-

gories were present in the biological world or in the physical world. In studying the external world, the mind uses its own concept and can grasp only such aspects of the universe as may fall within the scope and perspective of these concepts. The unity that the mind feels in the organisation of its categories is applied to the objective world and the unity of the mind is imposed on it. What we call science is nothing but the unification of abstract concepts which the mind is eager to discover for giving a logical and rational interpretation to its experiences. It acquires a sense of unity, between itself and the objective world. It seeks for the cause of the most changeable and the variable happenings and when it cannot directly satisfy its cause-seeking propensity, it projects something else that is beyond experience, be it God or gods, a law or a destiny. It believes in its volitional capacities, and would not rest content unless it can find a purpose, an act of creation, which can have meaning and fulfilment, in accordance or in consonance with the sense of will-causality that it has come to feel. The death that continually happens around us, cannot lead us to any absolute negation, for our mind cannot conceive it. Death naturally happens, as may be perceived by us all, and the body becomes inert and motionless. But though the mind may not be working in the states of sleep or swoon or in the case of epileptic fit, the existence of the mind during the period is brought home to us both by the continuity of consciousness and by the fact that we wake up from our sleep or states of epilepsy or swoon. Thus even in the primitive stages the mind conceives of the self as different from the body and also believes in its unity and integrity; many of the primitive people believed that the soul travelled from the body to distant places during sleep and swoon. In the primitive stage when conceptual thinking was not so well defined and when life was spent in greater familiarity with the animals of the environment, the people attributed the same kind of self that they possessed to the various animals. It is for this reason that totemistic idea held fast to a belief in the communion of life that men had with the animals; and thus developed their totemistic rituals and rites. In the initial stage of mental development, fancy and imagination remain-

ed unbridled, for at that stage the difference between fancy and imagination and exact truth cannot be distinguished. There is always therefore, a kind of haziness regarding truth and imagination at the time, and mere imagining any occurrence or seeing anything in a dream was regarded almost as an actual existence. Crude analogies, for example, sharing sacrificial meal with the gods were regarded as capable of producing a communion of holiness with the gods. Again, people were prone to believe that as life on earth was cut short, there could be a better existence, which would be available to them after death, and which they could not attain through their own attempts and endeavours. They imagined divinities of various sorts as having the power of giving them a better existence after death. The uncertainty of pleasure and pain, diseases and sufferings, accidents and epidemics, which could not be explained on the basis of natural causes were thought to be owing to the influence of evil beings and spirits or the departed forefathers for any transgression of customs. It was here that the magician and the medicine-man came to be trusted.

But the most important thing in the development of the psychology of man, is the development of his reasoning power under the urge of an emotion for well-being, which naturally helped the projection of the ideal of a better state of things in future. The religion as we have seen, is a system of beliefs that projects the possibility of a better state of things provided we control our conduct and thought in accordance with the wishes of a supernatural being, responsible for all that happens in the world. Thus one of the most fundamental elements of religion consists in the projection of the possibility of realising, what remained here unrealised, in heaven which contains nothing but pleasures and enjoyments. Such an ideal may be directly introduced from the nature of our rational activity itself. A few words on this subject may not be out of place.

Observation of the behaviour of the various organisms show that there is a tendency of an organism to maintain or to restore its equilibrium. From the very beginning of the life of an organism we can distinguish two distinct affective tones: one, conducive to the equilibrium of the organism and the

other which upsets it. With the growth and development or consciousness these two states began to be interpreted as pleasure and pain, and we find that with the emergence of volition as a decisive factor, the efforts of the organism or the animal are directed towards the attainment of pleasure or the avoidance of pain. For instance, if we take hunger, we see that it is the most fundamental of affective states, which is in reality nothing but the tendency to maintain a possible continuation of the metabolic process in equilibrium. The same is true of other appetitive demands. Sexual hunger is nothing but the tendency of the organism to free itself from the physiological disturbance, which the germinal substance produces by means of its hormonic secretions. The nature of this disturbance is very well seen in the lower animals, when they become gaudy with the approach of the mating season. In the vast majority of animals, sexual desire is a selfish desire for relieving the pain that is generated in the system; the animal becomes soothed as soon as the propulsion is effected.

There is also an important point in the life of the organisms, that they can adapt themselves under more and more difficult circumstances, e.g., increased heat and light etc., which then become their optimum, but which would be dangerous to another member of the same organism not so used. There is a part of the nervous stimulation accompanied by grandular secretion and the like, which remains in the background, and this explains the fundamental mnemonic property of animal physiology. The tendency towards physiological invariability, or towards the restoration of a previous physiological state, corresponding to a previous environment, depends on innumerable elementary specific accumulation with the total potential energy, acting like a gravitating force towards the environment or those conditions which allow the maintenance or restoration of the whole physiological system. In organisms with a nervous system these affective tendencies whose origin and seat are purely somatic, there would arise the affective tendency represented by the corresponding mnemonic accumulation connected with the different parts of the nervous system. In the case of man this is generally in the frontal zone. Cerebral mnemonic

accumulations gradually become independent and discharge themselves spontaneously. Two laws have been formulated by Rignano about the discharge of this mnemonic mechanism, (1) the gradual independence of the part in relation to the whole, and (2) the substitution of the part of the whole. Thus the affectation of the corresponding somatic regions become represented in the brain and act automatically. It is this mnemonic physiological reason that is responsible for the affective character or ideosyncracies. These later on appear as unconditioned reflexes which have been so satisfactorily demonstrated in Pavlov's experiments. It also happens that long habit of taking disagreeable things creates an optimum conducive to pleasure, i.e., smoking and chewing tobacco. "The organism seems to work" says Jennings, "toward a definite purpose". In other words the final result of the action seems to be present in some way at the beginning, determining what the action will be. This final result of the action really exists from the beginning in the form of mnemonic accumulation. The general tendency of the thought of man is towards a final and happy goal, which is contained within him in such a manner that the individual seems to pass through the ideal stages of his life in persuance of his goal, and attain a sip of the pleasure that he is to attain in future at the very moment of conceiving it. The heaven for which the devotee is anxious, is already present in him at the time of the inspiration by the Holy Ghost. It is this mnemonic mechanism that conduces to the optimism which is a *sine qua non* of religious psychology. In all advanced religions a beatific state, either of heaven or of pure painlessness or of a pure joy, is foreshadowed in the future and is always present in an ideal accomplishment, that urges him forward through the difficult stages of life in overcoming the obstacles that come in his path. The analysis of reasoning shows that the highest of our mental faculties is constituted of two fundamental and primordial activities, the intellectual and the affective. The first consists in simple mnemonic evocations of perception or images of the past. The second appears as tendencies or aspirations of our mind towards a certain end to be attained to which reasoning itself is directed. The affective activity comes into play in

reasoning not only directly through the evocation, selection and exclusion of sense images, but also in association with other mental faculties, such as the faculty of attention, imagination, classification, criticism, etc. Rignano says that all the faculties of attention, coherence, criticism, imagination, classification and abstraction gradually raise the reasoning from its primordial intuitive forms, to the highest deductions of science which all have an affective substratum. In spite of an affective origin there is the deviation that reasoning undergoes, when it passes from the constructive and creative to the abstract form, which is purely classificatory and sterile, the most typical manifestations of which are dialectical and metaphysical reasonings. The influence of affective tendencies can also be traced in the determination of the different types of logical mentality. Using the more imaginative memory, stored in our sensory mnemonic accumulations, as its intellectual material, the affective activity becomes the sole architect that creates every edifice of reason from the humblest construction of the lowest animal to the most elaborate triumph of the man of genius. The mnemonic property is exactly what gives to life its finalistic aspect. The end towards which man gravitates with his affective tendencies, and the changes that he can bring about both in himself and in the environment around him, are set in motion by one or other of the primary affectivities continually controlled by the secondary affectivity of the relative states of attention, and are the highest finalistic manifestations of life. Then arises the conflict between the finalistic attitude and temperament of man and the seemingly purposeless macrocosm outside, and man is driven forward by the finalistic structure of his brain to discover purpose and harmony all over the universe by unifying it and himself with the higher unity,—God or the Supreme Lord. In this opposition, between the essentially finalistic microcosm and the macrocosm, lies the ultimate foundation of the age-long struggle between science and religion, the first constrained by reason, founded on facts denying finality in the universe, and the second urge irresistibly affirming it by the imperious demands of feeling. This opposition between reason and sentiment may continue for ever unless, perhaps, man

resigns himself to the search for the ultimate reasons of his conduct, the supreme purpose of his existence, not in the whole universe but rather in the narrower domain of life with which he has community of origin and nature. If that community be profoundly understood, it will not fail to imbue him with a feeling of sympathy and solidarity towards all beings, and in particular the feeling of love and altruism towards his fellow men. As a consequence he will be impelled by a deep sense of duty to combat every cause of misery and to promote every occasion of joy. In the Sāṃkhya psychology the affective tones of life are regarded as more primary, as their formative influences are present even before the intellectual side develops. The Sāṃkhya believes that the development of reason is associated with the greater freedom and greater emergence of the aspect of thought. Ultimately, however, all formative influences work under a teleology such that the finality is achieved in the liberation of pure thought which is equivalent to pure joy.

To go specifically into religious or metaphysical modes of reasoning it may appear that the metaphysician, as well as the religious man, are concerned not with the truth but with the object of their faith. They are moulded by a powerful and pre-dominant desire to go beyond and deny reality. An eminent writer tries to solve the psychological problem of man's tendency to go beyond the world-experience, but he attaches an excessive importance to the purely intellectual factors at the expense of the affective ones. Purely intellectual factors can never suffice to account for the persistence of the anthropomorphic and volitional conceptions. It is only by assuming that our affective dispositions, which had from the beginning a higher role in the development of animal life, had still the same supremacy, that we can explain the facts of our religious psychology. The fundamental importance of religion dates from the earliest beginning of human societies as we have shown elsewhere. Religion has always endeavoured with complete success by means of a continual work of suggestions, to connect with its beliefs all the deepest sentiments of man, such as the need of protection and sense of justice, derived from our aspirations for happiness and love of life. The

preservation of supreme human values is due to our religious beliefs. Reason thus constructs a work of defence for the affective part of man against the conclusion to which the intellectual part would arrive spontaneously in its relation with the external world. The said writer says that the basis of theological philosophy is an inductive process which consists essentially in likening the causes and effects and their manner of acting, to man and his activity. This process is afterwards marked by another, which consists in assuming that God and His way of acting differ from the ways of man and his action. By this process the divine personality loses its anthropomorphic character and becomes a spiritual substance. The idea of divinity has thus often been denuded of its personality and reduced to a simple and arbitrary conglomeration of attributes. James says, in his Varieties of Religious Experience, that when God is reduced to a first cause and associated with the qualities–simple, immutable, eternal, omnipotence, omniscience–it is a mere shuffling and matching of pedantic dictionary adjectives. Such a God cannot satisfy the intellectual need and only has a purely affective value.

Man is as much a religious animal as a social one. The fact, that he is a religious being, is ensured by the very mechanism of his nervous system and brain. His reasoning had developed under the influence of affective tendencies and the microcosm within, which is permeated with a scheme of finality and purpose and finds suitable expression in religion. I, therefore, maintain that the form of religion may change in essentials and the material may also be largely modified, yet, under whatever guise it may appear the religious tendency is bound to manifest itself as one of the important modes of psychological expressions. But it is worthwhile our paying attention to the fact that in the transformation of religions, we cannot have such an elimination or introduction of new elements that may altogether nullify the purposes of religion. The fundamental essence of religion in my opinion consists of, firstly, a belief in the possibility of a better state of things, secondly, an emotional element, an urge or a sort of dependency on this higher nisus, be it interpreted as God, law or any ideal, thirdly,

an active element consisting of a moral transformation in consonance with the goal, and fourthly, a feeling of peace that one may have with himself and with his ideals expressed either as love of God or man, or love for the ideal. Religion therefore, is based upon a belief that by living in consonance with an ideal or being in relation of love with it, we may transform ourselves into a state of higher humanity and the milk of love that would flow from us, would lead us to a more and more intimate relation with man and with God, sometimes culminating in an emotion of final unity.

It may, however, be argued that the mere fact, that religion is an off-shot of human psychology of temperament, does not justify the validity of religious demands or experiences. In arithmetic, for example, we have two and two as being equal to four, or in geometry, that the three angles of a triangle are together equal to two right angles, or the law of gravitation in the field of science, truths that admit of no objective doubt. Can religious truths be justified or are they to be regarded as mere aberrations of human psychology? Here we see that these physical truths are such as we may perceive and utilise for our benefit in the world, but the religious truths are parts of ourselves and imply a becoming in us than perceiving. Apprehension of truth in external matters is not so much beyond doubt, or independent of our psychical constitution, as it may ordinarily appear to us. Thus the proposition that the three angles of a triangle are together equal to two right angles, depends on our two-dimensional space-notion on which Euclid's propositions are based, though the two-dimensional space is a mere abstraction, from the concrete three-dimensional space or the four-dimensional space with time as one of its dimensions. As soon as we consider space in its concrete reality as three-dimensional, the proposition becomes false, for in a spherical space, there cannot be any straight line at all, and therefore a triangle, not being bound by three straight lines, cannot have three angles equal to two right angles. Again, the law of gravitation has been believed to be true during last 200 years, because it explained many astronomical facts; but facts, which could not be harmonised with it, have now been discover-

ed and the field of the application of the law has become restricted. All logical truths depend upon the constitution of the mind which cannot bear the law of contradiction. Truth has been regarded as consistency with other experiences or correspondence with facts. The latter criterion of truth is difficult of determination, unless we can make the most unwarranted supposition that things are as we perceive them, that the various external conditions and circumstances and the physiological media, through which the objective world is presented to us, does not make any distortion or modification in their cognitive representation. We cannot here enter into a detailed discussion regarding the nature of truth, but we may assume that the consistency theory of truth has a better chance of recognition than the correspondence theory. We may thus assume that truth may provisionally be regarded as that character of a judgment which, when accepted, makes it a consistent contribution to our cognitive grasp of other things or ideas. The experience of truth occurs when the will for the realisation of the immediate end of the cognative activity is attained, and when the acceptance of a particular judgment works in harmony with the ultimate aim of our cognitive efforts and the cognitive grasp of things. Truth is thus immediately experienced as a non-contradiction to our nature, but here an important provision has to be made. In our psychological nature there are different departments which have an inner integral harmony among them; yet it is not always possible to have the experience of one department attested by the experience of the other. Thus, the experiences of emotion or feeling may themselves be differentiated in diverse ways. So the appetitive emotions, the self-preservative emotions, the sex-emotions may be clearly distinguished from the emotions that pass as the logical sentiment, the moral sentiment, the religious and aesthetic sentiment. In every religious belief there are two parts: the aspect of knowledge constituting the object of belief and an emotional state, a feeling which is associated with it and expresses itself in action. In the evolution of the religious sentiment the element of knowledge suffers modification. Thus, in the first stage, we have perception and concrete imagination associated with

fear and utilitarian ideas. In the second, there is the metaphysical abstraction associated with the preponderance of the moral element. In the highest stage, the emotional element often predominates and swallows up other considerations; and sometimes the emotional part becomes rarefied and absorbed in intellectual contemplations. There are differences of opinion regarding the evolution of the different stages of religious psychology. In different stages of religion we have fear, as composed of painful and depressive states, and veneration. Then again, we have tender emotions, consisting of admiration, confidence, love and ecstasy. The worship of the evil gods, ghosts and spirits are supplanted by the worship of beneficient beings; God of love takes the place of God of fear and the sanguinary sacrifices are replaced by the demand of the sacrifices of one's evil passion, and homage and loyalty to God. The religious and moral sentiment coalesce together and the religious feeling heightens the moral feeling. The religious feeling, which in the primitive stages could not be distinguished from the pursuance of selfish ends, becomes later on transformed into the most developed emotions of altruism. The problem of human destiny and concern for one's eternal welfare becomes an important urge of religious sentiment. There arises a belief in a preliminary judgment of man's action as being decisive of his future destiny. This enlarges into various conceptions of future life. With the rise of the philosophical attitude there is sometimes a decay of the emotional fervour. But this is not always the case. Sometimes, specially in the highest development of religion, the unity is grasped, not by the intellectual vision but by the emotional enlightenment and ecstasy together with great emotional excitement associated with bodily demonstrations; and moral development of the highest order follows. Thus Ribot says, "Religious feeling is a complete emotion with its strain of physiological manifestation. At the period of its fullest development, the religious feeling may become a passion yielding to no other in tenacity and violence, when it descends into a religious fanaticism. It borders on madness without quite crossing the line. This passion would require a psycholo-

gical monograph to itself, and there is no lack of documents whence to compose one."

We shall later on deal more elaborately with the religious sentiment, but our point here is, that the religious sentiments bring with them a profound force which can make an intensive and extensive change in our outlook of the world, our attitude to our fellow-beings, our sense of duty and moral responsibility, our faith in a future, an optimism that may completely transform our being. Religious truths in this sense are to be regarded as dynamic and as being in unison with the process of life itself and should thus be distinguished from the physical truths, which are of a passive nature and which may only indirectly influence our life. From this point of view there is nothing in the physical truths which may be regarded as so continuous with our religious experience, that consistency with physical truths could be regarded as a *sine qua non* of the apperception of religious truths. As Whitehead says, "A religion is a force of belief, cleansing the inward parts. For this reason the primary religious virtue is sincerity, a penetrating sincerity." On the doctrinal side, therefore, a religion may be regarded as a system of beliefs of general truths which transform character when they are linked through emotion and volition. The faith that forms the bed-rock of religion is not a mere idiosyncrasy, a mere optimistic dogma, but is significant in all the dynamism of life. Even in the pursuit of physical truths it is this faith, as Planck says, which is the highest asset of a man of science. In our pursuit of science through trial and error it is this faith that gives courage and tenacity to the scientist to push forward in the labyrinthian mysteries of nature. Our character and conduct of life depend upon its internal convictions. Life after all is first internal, before it can be external, and religion is the art and theory of uplifting ourselves and of renovating and rejuvinating our internal life. It is in the inner testimony of the heart that all value receives its ultimate recognition. We should, therefore, distinguish religion from other social phenomena. The religious integrity and unity is an emergence of new facts and phenomena, which assimilates within itself the fundamental social facts and the discovered facts of the objective world, which it

utilises in its own way for building up its finalistic structure of unity between man, the universe and God.

The structure of our mind is through and through social. The language that we speak, the ideas that we carry, our outlook of things and men, have all sprung from our social environment. In consequence of this we share a common order of reasoning and a common human nature, yet we reach very different conclusions as we approach the same problems with different attitudes and with different inclinations, and we are also affected by the beliefs of others around us. Conviction is a social process and follows the herd instinct. Tradition and conventions bear heavily upon us and determine what we believe as rigidly as what we eat or what we wear. We are in the stream and are borne along by the general current and caught in the eddies and tossed by the waves of our immediate surroundings. Still we must sink or swim by individual strokes or efforts and give them the direction of our purpose. Each one of us tries to affirm himself and show the impress of his psychology and loyalty to his mind. This is most prominent in our religious attitudes. In the higher form of religious life the individual carries the whole society of human beings within his own personality and approaches God in his solitariness. Being in the multiplicity of society, and the infinitude of men, the individual transcends this multitude, and unites it with his finite, yet boundless personality and lays it in resignation to his God. Through the evolution of religion we pass from God as the significant spirit that can do us harm or good, to God, the majestic, the source of fear, the strong and hard judge, and to God, the good, the companion and the lover. Collective enthusiasm, institutions, churches, Bibles, the Vedas, the Quràn, the codes of behaviour, the taboos are the trappings of religion in passing forms. They are only temporary expedients, which may be useful or harmful. When we look at the evolution of religion from our advanced points of view we find many elements from our appetitive sides, entering into the sphere of religion and making the stream of pure effulgence turbid. In our concern for true religion, it is not enough to say that one religion is as good as another, but we have to see how far any religion can meet the

demands of our advanced psychology and free ourselves in the direction of spirituality.

So far as religion consists in the mere observances of dogma and tradition, the mere ceremonials and forms, the rites and the rituals, it only follows the social practices and customs of the community. From this point of view religion becomes a consolidating and separating influence. When a horde of barbarians, who had accepted Mahomet's religion of 'death to the infidels', burst upon the other civilised states of Asia, they were inspired with a religious feeling. They offered many states the alternatives of conversion, tribute or the sword. The vindication of religion became to these early Moslems a source of social consolidation and integration. When we contemplate the loyalty among many millions among one another as servants of the prophet or God, we may understand very well the consolidating power of religion. The deadliness which sometimes the externals of religion may attain, is extremely shocking. "Because A or B has asked me to believe what he believes to be right, therefore, I shall kill you unless you believe it." In many of the religions, religion is supposed to dictate what food I shall take, who will cook for me, what kinds of clothes I shall wear, on which days I may shave or may not, and all kinds of external details of ceremonies on special occasion of marriage, birth, death etc., which form together a systematic whole, avowal and loyalty to which conforms with the social side of religion. It is religion so far as it conforms to the general social avowal, and, therefore, forms the outward characteristic of a society, that had often been the cause of mortal quarrel between societies which came in contact with one another. The wars of Jehad and crusade are instances in point. Sometimes these externals of religion are also associated with race pride. We thus see that so long as we touch the mere social side of religion, they appear as social facts and contribute to the social solidarity, such as we find among the Moslems, and this social or religious solidarity becomes on the other hand a great separatistic influence that makes the members of one religion often actively hostile to the other. But religion to which I was drawing attention, was more a solitary phenomenon, a phenomenon of spiri-

tual awakening, a moral upheaval, repentance and hope, humility and courage, resignation and confidence, a determination for uprooting greed and animosity, and a sense of humble loyalty and contemplation with which one opens the chambers of one's being, to the Lord who has been projected from out of one's heart. The mere fact of there being an unparallelled cosmic enigma, shaping the destinies of matter and motion, plants and vegetables, would not be a sufficient incentive for a true religion. If a man submits to God through fear of His majesty or dread of His power or the hope of the reward that He may give, he is following only a prudential instinct of mere self-preservation and race preservation in the animal sense. The primitive people and many of the advanced religions in their older stage passed through this stratum of ideas. Thus among the Jews we find Abraham and Moses entering into a covenant with God, who acted as their ally, showed them the majesty of His power by His miracles, punished men with thunder and brim stone for their misdeeds and when Job complained that he was visited unjustly by affliction, even though he was just, railed him with the majesty of His power as a creator. In the Upaniṣads also we find a trace of this line of ideas in such passages as "mahad bhayaṃ vajram udyatam' that out of His fear the wind moves, and death grasps men, in obedience to His orders. The Brahman in certain passages is described as being the repository of all powers of nature. In all the other primitive religions also we find God regarded as the source of all power; and obedience to His orders is regarded as the source of religion. But in the higher aspects of religion we have a nearer proximity with God and our relation with Him is that of solitary communion and contemplation.

The religions are often associated with rituals, and rituals are associated with dogmas. A dogma is any proposition which has a metaphysical significance and which is believed without any proof. Thus when a man asserts the existence of God from theological arguments, then he may be supposed to have a philosophical belief, or a philosophical dogma of religion; but if a man believes in God because the priest has told him so, his belief in God is a purely religious dogma. Not all propositions

are dogmas. Thus the proposition that Caesar was murdered by Brutus is not a dogma. 'But Jesus is the son of God' or 'Mahomet is a prophet of God' or 'there is but one God' are all dogmas. Any proposition which asserts any relation between man and God and has a metaphysical significance should be regarded as a dogma. The affirmation of God's existence is also a dogma. Religious dogmas are those, the acceptance and non-acceptance of which would affect a man's religious position. There is hardly any religion without a dogma. These dogmas often proceed from the psychological demands of a man's constitution which often become the objects of rational support. Thus one of the fundamental dogmas of religion is that the universe as a whole should be judged as good, where justice prevails, that the good is rewarded and the evil is punished. Such a dogma proceeds from the demands of human psychology to believe that we live in such a world in which progress and well-being are possible. We can easily see that nothing that is achieved by science can supply the place of such a dogma. It is clear that science cannot say anything to assure us of our harmony with the universe, without knowing what the real nature of the universe is. But where any such nature is asserted that would itself be a dogma.

McTaggart defined religion as an emotion resting on a conviction of a harmony between ourselves and the universe at large and therefore, repudiated the idea of virtue being a basis of religion. But we are not able here to agree with McTaggart's definition of religion as a mere emotion of a harmony between ourselves and the universe; for, a mere emotion like that cannot be said to produce any change in a man's character. Such an emotion may be only of a passive nature, whereas in our definition of religion, the emotion must be so active as to produce a radical change in the character of the individual. It is for this reason that we consider rituals, rites and ceremonies as being merely social facts of religion, contributing to social solidarity and a sense of communal unity; but they are not 'internal to' religion. Virtue, therefore, should be the product of religion, a necessary deduction of the transformatory movement that is produced in the

character and the attitude of a person. In the case of the lower stages of religion, rituals have often supplied the stimulus to emotion and since in most religions, the importance of emotion has been emphasised, even drugs have often been used to stimulate religion. But so long as religion is immersed in rituals, the inner significance does not dawn and religion does not emerge properly from its social basis for the integration of which the rituals play an important part. Thus in the assembly prayers, festivals and sacrifices a common feeling of co-religionism, a kind of religious fraternity in the individual minds finds itself reflected in the group mind and behaves more or less as its function. We have seen the great social force which the Islam could evoke by its system of common prayers, common fasts and feastings, common offerings of sacrifices etc., which had combined the Arab hordes into a war-like people which swept all oppositions on the way. The element of religious brotherhood which the Islam imposes as against the non-moslems, always proved the most effective social bond in knitting together party and tribal factions. But this part of religion which is helped by rituals, which in their picturesque and artistic expressions appeal to the primitive side of our minds, and are supported by myths and legends, is conceived and believed in by the raw and fanciful minds in the young stage of humanity. In the primitive stage of mind, analogy, howsoever fanciful it may be, takes the place of science. In the Brāhmaṇas most fanciful etymological meanings are given of the names of gods and their actions. The rites, that are associated with them, deal with articles which are in common use in the primitive society. Custom lends holiness to the rites, which continue in an uninterrupted manner through the ages, when even their meanings are forgotten or would be extremely unimportant to the new, altered social conditions. Thus, for example, at the time of the Hindu marriage ceremony the barber, who probably played the part of a butcher in ancient times, utters the words 'gauḥ, gauḥ' i.e. 'Here is a cow, here is a cow' to which the bridegroom is supposed to reply, "I would rather, that you should not kill the innocent cow for my sake". Now, this is a relic of the ancient custom which enjoined that respected guests

should be entertained with beef or veal. The bridegroom, being the most respected guest, was shown the cow, with the meat of which he was to be entertained. But cow-killing at the present day has become most repugnant to the Hindu mind. If the significance of the ceremony was ever attended to, it would have been extremely shocking to the Hindu mind with its present attitude towards cow-killing. But the ritual verses are uttered in a formal manner and no one attends to what it stands for. So there were many vulgar customs with regard to marriage and rites of puberty, which have come down to Hindus from ancient times and their vulgarity or obscenity have lost their force. The rituals, the emotions and the myths that are associated with them support one another. It is probable that rituals are more primordial than myths which were later on invented to support the rituals, or to extol their nature; though there may be cases in which the rituals were invented to suit the myths. Thus almost every Hindu Vrata has a myth associated with it which explains how the rituals first started. These myths associated with Vratas are called Vratakathās, which are sometimes instructive and at other times mere common place stories. Sometimes the rituals start upon a very slender basis.

Among the primitive people the idea of the individual or the self, though realised as distinct from the body was not realised in its higher interest, which is absolutely distinct from the biological interests. The idea of transmigration or resurrection that we find among the Assyrians, Babylonians or among the Egyptians and also elsewhere, is largely impregnated with biological ideas, mainly, that of a life whose main interest was the welfare of the body. So when a particular body lost its consciousness and the individual was supposed to die, the primitive mind was interested in securing similar pleasure and enjoyments for the departed soul with which he was familiar in this life. In the primitive mind the spiritual nature of the self had not emerged. The immortality, whether it be in the form of a totem or an ancestor or a spirit, is all more or less on the same level. It is a mere duplication of the same life as animals or plants as ancestors, spirits or ghosts or as men. In the story of the Kaṭha Upaniṣad, Yama, therefore, narrates two kinds of

immortality, one through endless births and rebirths and the other, through real spirituality to which the conception of birth and death does not apply.

Religion, as we have seen before, consists of a belief or a body of beliefs, associated with emotion and involves an operation of change that may be conducive to our welfare in the present or in the future life. Ordinarily the effort by which the religious achievement of benefits is made is not of the nature of normal causal operation and its effect in the scientific or usual sense of the term. The primitive mind, whether in ancient savages, or as existing within us, believes that advantages can be wrought by observing certain rituals of worship by which deities being pleased would grant our prayers; or, that certain other kinds of formalism, incantations and rites, could be practised by which it was thought that the forces of nature or the spirits could be forced to yield to our advantage. The prominent difference between rituals and magic rites consists in the fact that the former are employed for appeasing an anthropomorphic super-person or persons, and the latter, for wringing advantages by the mere mystic quality of things, their collocations or operations. But the intention both in rituals and in magic rites is nothing more than securing advantages or warding off of disadvantages of the mundane life.

It may not be out of place to make a passing reference to the contributions which psycho-analysis presumes to make in the domain of many rituals and practices. Thus with regard to taboos, expressing themselves in restrictions and prohibitions, Freud thinks that "There is a sense of holy dread which is more than what can be regarded as positive fear of the supernatural. The taboo prohibitions are not always traced to commandments of gods or moral prohibitions, but they often lack all justification and are of unknown origin." Wundt regards the taboos as the oldest unwritten code of law of humanity. They go back to pre-religious stage. In the 11th edition of the Encyclopaedia Britannica F. W. Thomas describes the taboos as follows "Properly speaking taboo includes only (a) the sacred or unclean charac-

ter of persons or things, (b) the kind of prohibition that results from the character and (c) the sanctity or uncleanliness which results from the violation of the prohibition." Various classes of taboos in the wider sense may be distinguished; firstly, natural or direct, the result of "mana", the mysterious power inherent in a person or thing, and secondly, communicated or indirect, as also acquired or imposed by a priest, chief or other person. The term taboo also denotes ritual prohibitions or interdictions. Originally the punishment for the violation of a taboo was left to an automatic inner arrangement. Sometimes, however, it was regarded as a peculiar power, inherent in persons and ghosts, which can be transmitted from them to the inanimate or animate object, also regarded as the source of the taboo. The fact, that a taboo is transmissible, has probably given rise to the belief that it can be removed through expiatory rites; much of what passes as religion, is thus nothing else but customs relating to this taboo. In the Hindu religion a large part of the prohibitions in the Smṛtis which have religious sanctity, is in reality no religion, but customs relating to taboo. Yet among people in general the taboos occupy a more serious place than the essentials of religion. Thus, the section of Smṛti on impurities is almost wholly an illustration of taboos. Impurities originate in various inexplicable ways. If one's parents or near relations die he becomes impure for a particular period and the impurity can be removed only by the performance of certain specific funeral rites, such as, shaving the head, and pairing the nails. Touching a woman during her periods and at the time of confinement causes defilement amongst many people apart from the Hindus. Touching impure people or people of very low caste or looking at them or touching their shadow is also supposed to cause defilement, which can be removed by ablution or other expiatory rites. In the same way eating forbidden food, for example, the chicken and the beef, or eating food cooked by or touched by a non-Hindu, is supposed to cause defilement. This defilement is also transmissible; any one who takes food touched by such a defiled person or in the same row with him, or takes any gift from him, or even eats food provided by his money, becomes

defiled. The sins of contamination do not always follow actual contact, but often follows any kind of relation or association.

Wundt, after examining Australian and Polynesian taboos, holds the view that the expression and evolution of the belief of primitive races in demoniac powers was the origin of the doctrine of taboos; and that later on taboo dissociated itself from this origin and remained a power simply by virtue of its psychic persistence and in this manner it became the root of our customs and laws. Freud, however, is disappointed with this explanation and thinks that it does not go sufficiently deep. It does not explain how the original demoniacal association became disintegrated from the general taboo idea as a sacred dread unassociated with demoniac relation.

Freud finds an analogy between the behaviour of neurotics and the effects of taboo ideas. The tendency in both cases is unmotivated, original and enigmatic. These neurotics cannot give us any more psychological analysis of their mind than that they have a vague premonition that a certain kind of violation will be followed by unbearable disaster. Any external threat of punishment is unnecessary and superfluous; because there is an inner certainty, a sort of conviction that a particular type of violation will produce a disastrous effect. In the taboo also there is a touch phobia. These appear as religious ceremonials. Freud thus summarises the correspondence between taboo, customs and the symptoms of compulsion neurosis consisting of the following points—(1) neither of them is motived by any commandments; (2) they proceed as if from an inner need; (3) fear of danger of contagion; (4) in the causing of ceremonial actions and commandments relating to the forbidden. Freud supposes that in both cases there was originally an internal desire for something proceeding from an inner need. For some reason or other, this was strongly prohibited by others. Later on when the nature of the object for which there was the inclination, and the nature of the inclination were absolutely forgotten, the inclination simply spread out to some other thing; and the prohibition for which the reason was forgotten, remained as a strong motive force, the violation of which was somehow believed to be attended with mischievous results.

The original motive was displaced and distorted. Freud then further says that an original desire in man was to touch one's own genitals, this was prevented or prohibited by the senior savages; the motive and object were forgotten and the object of inclination and direction of prohibition were displaced. The prohibitions maintained themselves from generation to generation, perhaps only as the result of a tradition set up by paternal and social authority. But in later generations they have perhaps already become 'organised' as a piece of psychic property. Whether there are such innate ideas, or whether these have brought about the fixation of the taboo by themselves or by co-operating with education it is indeed difficult to decide. The persistence of the taboo, however, teaches one thing, namely, that the original pleasure to do the forbidden thing still continues among the taboo races. They therefore, assume a particular attitude towards their taboo prohibitions; in their unconscious they would like nothing better than to transgress them but they are also afraid to do it; they are afraid just because they would like to transgress, and the fear is stronger than the pleasure. But in every individual of the race the desire for it is unconscious, just as in the case of neurotics.

But howsoever it may be possible to trace the development of these psychological situations, involved in ritualistic ceremonials, they are explained through the idea of a change of the object or a modification of the purpose. The Freudians try to explain most religious ideas as also the idea of sacrifice, God or other rituals, by the sex impulse and that of the Oedipus complex. Many followers of Freud seem to have an air of certainty about them. The writers always almost as a rule, seem to take the advantage of their being experts in the treatment of neurotic patients and apply most fanciful views regarding the origin of most psychological phenomena of later life, either in the individual or in the race as being due to suppressed sex feelings, their subversion, alternation or modification. We are no doubt prepared to admit the validity of the unconscious as a real category of mind, which, from the background controls much of our conscious psychology; but to suppose that the unconscious should be constituted mostly of sex-

impulses and the pathological conditions of their repressions, is more than what can be easily swallowed. On the other hand, we believe that religion as well as art in some form or other, is fundamentally a function of human psychology. The wonderful cave drawing of the palaeolithic period consisting mainly of sculpture in stone as well as reliefs and rock engravings, show remarkable artistic gifts of the primitive men which is far superior to the work of the modern people. In the case of female drawings, the sex characteristics are often accentuated, and Dawson supposes that this is probably due to religious or magical ideas regarding fecundity. In palaeolithic times this sculpture is confined to Europe and is one of the marks which distinguishes the earlier culture of Europe from the later ones. The later culture possessed a very distinctive art of its own which developed without a break through the whole of the later palaeolithic period down to the beginnings of the neolithic age, whereas the older culture was replaced by a sudden intrusion of the Asiatic culture which seems to be quite different from that which evolved in Elam and Egypt in the neolithic age.

Even in palaeolithic times there is a good deal of racial admixture, and the supposition of fixed types of racial psychology, so often indulged in, is, to a large measure, a myth. From the first we have to deal not with pure races but with regional types which are the products of social and cultural influences. Cultural affinity is a spiritual one owing to their being exposed to common influences and common attitude to life. For this reason it is not so much the racial data but the cultural data that determine religion.. Throughout the history of humanity the religious impulse has been always and everywhere present as one of the great permanent forces that make and alter man's destiny. The deeper we look into the past, the more inseparable does the religious instinct appear with human life and society. The beginnings of religion are at least as old as human consciousness and it is conterminous with the origin of language and social life. This proves how impossible is the Freudian theory which tends to derive the categories of religion from the categories of perverted sex notions. Dawson says that wherever and whenever man has a sense of dependence on ex-

ternal powers, which are conceived as mysterious and higher than man's own, there is religion, and the feelings of awe and self-abasement with which man is filled in the presence of such powers is essentially a religious emotion; which is the root of worship and prayer. According to him therefore, the definition of religion has to be more widened than that given by Frazer, who limited religion to the conciliation and worship of the supernatural that controls the forces of nature, or Tyler's definition that religion consists in the belief in spiritual beings. It is natural to see, therefore, that the rituals and ceremonies were either for the propitiation of the mysterious power by offering of such things as were prized and valued by the people or were associated with a magical character, or a combination of them both.

The religious instinct is a part of the nature of man and it is constituted of affection and fear. Its power is felt strongest when at the time of the individual and the social crisis, man is brought face to face with the unforeseen and the unknown. The primitive societies, are largely dependent on nature; the seasons of birth and death, spring and the winter, are always associated with religious demonstrations. Death being the most terrible of all human phenomena, excites the emotion of religion more than anything. We have already said that all religions involve dogmas, i.e., metaphysical presuppositions and even in primitive times man was metaphysically bent in projecting things and conditions which were beyond the powers of his senses or reason. He believed in forces, powers or beings that determined and controlled his life, could produce good or evil, and could be propitiated or angered. He had semi-conscious or unconscious belief that somehow certain kinds of movements or association of things under particular conditions had the power of arresting even the unknown forces or of producing good fortune irrespective of the fact that no rational connection between the two could be established. This shows that man could not have made such projections with regard to things or conditions with which he was not immediately concerned for appetitive needs. No animal does it. This foreshadowing of beliefs into the unknown, constitutes the intellec-

tual side of religion. The emotion connected with it forms the very life of religion and the operations for which man felt an urge, forms the dynamic part of religion; magical activities develop into morality, the dogma into philosophy and emotion into ecstasy and communion. Rituals, constituting of sacrifices, adoration and the like, gradually lose their material aspect with the advancement of religious consciousness. Such advancement, however, is hardly possible in the early ages of a race where we can find only shadowy dawn of religious consciousness. The element of fear, also, which plays an important part in the immature state of a society and race, is later on sublated by the higher development of religious consciousness when affection and love towards humanity and deity become gradually more and more supreme.

The Neanderthal man who is so primitive that he can hardly be called to have arrived at the human stage, also cared for the dead. In several interments of this type of man that have been discovered, there is evidence that the disposal of the dead was accompanied with practices which point to the belief in some existence in or beyond the tomb. The weapons and implements and food offerings were also buried with the dead, and in one case in the later palaeolithic age the horn of a rhinoceros was found buried with the corpse, for such horns were believed to have magical significance in that age. The Neanderthal man had disappeared entirely and therefore, could not have influenced the later type which also showed considerations for the dead.

The modern savages cannot always be regarded as representatives of truly primitive conditions. There are some, like Professor Sollas, who believes that the existing primitive savages as the Australians, are practically unchanged survivals of prehistoric culture; while others like Rivers and Smith, believe that they owe the greater part of their social and religious institutions to the influence of past cultures. The fossil skulls found at Wadjak in Java and Talka in Queen's land show that there was a separate human type in Australasia more archaic and undeveloped than the Neanderthal man and the large-brained and talented men of the palaeolithic age. The Sudaman islan-

ders and the Tasmanians of modern times, though they came later, were less gifted than the earlier originations.

The hunting culture of the primitive people, such as is found in Siberia and Canada, has great affinities with the culture of palaeolithic Europe. It shows a belief of some vague undifferentiated unity behind the changing phases, a sort of primitive pantheism, referred to by Powell and described as the religion of mana by Durkheim which is decidedly pre-animistic. These people did not believe in separate supernatural beings, but in one supernatural fact, which is impersonal and inscrutable, but which manifests itself in man in a human and personal form. This supernatural energy should always be differentiated from natural energy. This cosmic supernatural power was everywhere recognised by the people of North America under many different names, Orenda, Wakan, Manito, etc. Though it is neither theism nor animism, it has a considerable affinity to these. Again, the word 'Mulungu' applied among the Yao of Nyassaland is applied alike to ancestral spirit and the creative power behind nature; when these primitive people wished to distinguish the personal from the impersonal spirit, they applied the prefix "Che" to distinguish and designate the latter.

Again, as a hunter has to live among the beasts he has to pacify in his mind the lord of beasts. The worship of the lord of beasts is, therefore, one of the earliest in civilization and in India it finds its expressions in the worship of Paśupati which is recorded in the earliest art of India in Mahenjodaro. Among the Flingit of Alaska, when the head of a dead boar was brought into the camp, it was addressed to as follows, 'I am your friend, that is why I am hunting you'. When one comes to a bear trail he says, 'My father's brother-in-law, have pity upon me, let me be in luck'. Dawson says that the palaeolithic animal paintings were in fact the magical beings by which man acquired power over the beasts. In some of the caves we find inner sanctuaries which had been the scene of prehistoric religious rites with regard to animals. The belief in the animal guardian spirit was almost universal among hunting people. In Hindu mythology the fish, the tortoise, the boar and the dragon are regarded as the primary incarnations of the Great Lord. Some-

times the particular animal, looked upon as the guardian of a person, was revealed to him when he fell into a sort of ecstasy after fasts. This was also associated with rituals and rites of initiations. It is possible to trace the origin of totemism from such beliefs in palaeolithic times. The neolithic culture which advanced more rapidly in Asia than in Europe, reveals a pastoral culture on painted pottery as distinguished from the pottery in the palaeolithic age. While Europe was passing through the stage of palaeolithic culture, Asia became the original cradle for the development of the human race. The first important discoveries were made in Susa, the capital of Elam. Its connection with the culture of Mesopotamia was evident. Discoveries were also made in the Indus valley which showed a very highly developed culture revealing the worship of gods and also, probably, the crude elements of the science of yoga. The culture found in the Indus valley and Beluchistan is very closely connected not only with that of Susa and Crete, but also with Egypt. In the primitive society the whole system of organisation rested on kinship to the woman, and there were some people among whom the government of the clan was actually in the hands of the older women. As an off-shoot of the importance that agriculture played at that time the earth was regarded as the mother of the crops and was designated as earth mother (mātā Vasumatī) that is, the mother of all that is valuable. The worship of the earth-mother thus prevailed among the people of the Sind-valley and Mesopotamia, and it was associated with pastoral festivities, survivals of which can often be seen in the living religions. The dying of the crops and their fruition again in the other seasons, instilled people with the idea of resurrection as we find in the Assyro-Babylonian religion and the religion of Egypt. The religion of the mother-goddess appears almost everywhere in pre-historic Europe. The cult of the mother-goddess, as Kālī or Durgā and other feminine forms, is a most important feature of the religions of modern India and particularly of Bengal. This cult, though associated sometimes with terror and is very closely connected with the idea of sacrifice, has yet a beneficent aspect both in India and in other countries.

It is, however, unnecessary for us at the present stage to go into the idea of the gradual evolution of the concept of God among the primitive peoples, and whatever has been said, was by way of digression. The point, that was intended to be emphasised, was that religion is a universal human fact, and is not merely an off-shoot or excrescence of the social side of man. The religious attitude which emerges as a special human fact from almost the earliest human stage is a special faith (which may be conscious or semi-conscious) in certain dogmas, and opinions regarding particular states of existence, the possibility of a permanent good to us and demanding our dependence on some unforeseen power behind the panorama of things and phenomena, and also particular courses of actions on our part in consonance with it all. In religion these psychic constituents appear welded together as a whole and we find various investigators regarding the nature of religion emphasising different aspects of it. Maxmuller and others defined religion as dependent on the supernatural, while others defined it as beliefs in certain dogmas associated with emotions, and so on. The attempt of Freud and his followers to deduce the idea of sacrifice and other religious attitudes from the Oedipus complex or sex repressions does not appear to us to be very cogent.

Psycho-analysis was born of medical necessity, in the need of helping the victims of nervous diseases to whom rest and other forms of treatment could bring no relief. It led to a new research towards the discovery of mechanisms whose nature was concealed in the unfathomable depths of the unconscious. Researches in this direction indicated that the unconscious mentality was the common ground in which the highest as well as the lowest mental impulses were rooted. They also showed that there was always an unconscious war between these impulses and the cultural influences, and that the ego, not having power enough to exterminate those mental forces which it could not control, turned away from them and protected itself against their demands, by means of energetic defensive or reactive mechanisms, or sought to compromise with them by means of substitute gratification. It was thus that we could account for the emergence of proscribed and repressed things in dreams and our proneness to fall

ill with neurosis as soon as the distribution of power between the ego and the repressed, is altered to the disadvantage of the former.

Sachs, Rank and many other scholars, such as Robertson, Smith, and others, have collected materials for making a study regarding the psycho-analytical origin of many religious rituals.

If religion is a faith in the permanent possibility of welfare, sin, objectively defined, would be loss of balance or harmony in the permanent possibility of this well-being, be their source in the society or in the ingrained incapacities or perversities of our own mind. We may have the sin in an objective manner, but we may not be always conscious of it subjectively; when we are subjectively conscious of it as a source of evil, catastrophe and danger, our natural instinct is to seek the aid of some superior power, and we wish to do something ourselves also for removing the sin or the wrath of God that may be consequent on it. Since sin is not a visible and tangible uncleanliness, that can be removed in visible and tangible manner, we improvise rites to which somehow efficacy is attributed and which stand as a substitute of any possible actual operation for removing the sin. We fast or torture the body, abstain from desires and are led psychologically to think that we have courted such punishment as we should like gladly to bear to prevent the terrible punishment that may come to us in consequence of our sins. Fast and festivities, abstentions and self-tormenting practices have often been the natural outcome of an effort towards the repulsion of sins and the self-imposed faith that the adopted measures have been successful in removing them. There is an omnipotence of thought which can transfer actuality to the unreal. Fasting, for example, may be efficacious in reducing turbulent passions through starvation and so also may be sickness. Many persons are known to have courted sickness as a means of keeping themselves pure. But it is an entirely different matter as to whether fasting is indulged either for health or to weaken the evil impulses. When fasting is supposed as a prophylactic or curative against sin, it is supposed to have a magical effect in which the idea operates that by undergoing certain privations one can prevent it. Counting the beads and chanting

of hymns and meditation on certain formulae were believed to imply mental effort by which one could think of removing the sins or of propitiating the deity. Most of the rites thus seem to have arisen through a process of transference of psychological values from one kind of operation to another out of the necessity of the mind for inventing certain operations which would be efficacious for repealing the evils.

The psychology of religion attempts to express the workings of the mind, in that particular phase of its existence that we call religion; it assumes that our mind works more or less in the same way in religion as it does in other spheres. It does not matter for the psychology of religion to discover whether God exists externally as an omnipotent and omniscient maker of the world. For even if there had been such an omnipotent and omniscient creator, far beyond the conception of us, poor mortals, and if we had never felt any personal relationship with Him, such as demi-urge or the omnipotent architect would have no place in religion at all. It is in our feeling about a creator or maker, in our faith in his absolute goodness and love that religion is sustained and nourished. The metaphysical reality or the scientific proof regarding the existence of God may be entirely lacking, but that would not affect the consciousness of a religious man or the validity of his emotion or the dynamic aspect of his purpose in carving out his ideal in morality, the love of good and humanity. The most important thing for religion is not so much the psychological development of the idea of God in the race or in the individual; it is not important whether it ultimately developed from the primary or secondary sex impulses or the Oedipus complex or totemism, but what is important is the pathology of the religious experience. Its reality consists in its being a human fact and not a scientific or objective fact. Who knows whether in the end the vision of our mind and the impression of our senses, the logicity of our understanding is not, after all, a bad mechanism for producing false and illusory notions, warding us off eternally from the discovery of truth. As men, our minds are limited to the phenomena of all our experiences and our discovery of truth. Whatever has value for our mind has existence, and as such, an

existence superior to what is discovered by the senses. Whatever is discovered merely by the senses has no worth in itself. It attains value and worth only when it is assimilated with our notions of worth and value. The nature of the experience of the religious mind as divested of the local colourings of rituals, rites and ceremonies, is, therefore, the aspect of religion with which we are most directly concerned. Whatever be the origin of the mental states of religion we assume that once they are in mind they attain reality. A living being when analysed may be found to be nothing else than the collocation of matter and energy, yet when life emerges, it is absolutely a new fact; so religion also is a new emergence of the human mind which undergoes evolution towards perfection not always in the process of time, but in a mind most equipped for the purpose. Religion differs in this from other kinds of evolution that it reveals itself in its developed form in the minds of the religious geniuses, who become the instructors of humanity in religion. It is in this way more akin to poetry and art, the development of which is found in the mind of particular geniuses and not merely in the history of time. A Shakespeare, a Dante, a Goethe or a Kālidāsa, a Buddha or a Christ, a St. Francis or a Chaitanya, may not repeat himself in the history of time. Hundreds of years have rolled away since Plato, Aristotle or Shakespeare flourished, but we do not expect another Hamlet or King Lear to be written or the wisdom of the dialogue of Plato repeated in the so-called advanced modern age.

It may be urged that a scientific method of the study in religious psychology may destroy that atmosphere of reverence that is characteristic of religion and bring it in a level with our other activities; but this objection is not well-grounded. If religion is well-founded in our nature, our study of its psychology is bound to produce real support for it. After all, our mind is governed by its own laws and if religion is a human fact, it has to justify itself before them. It is impossible to say now that psychological questions should not be raised in religion, for the questions are already being raised and it is impossible now to get back into a condition in which they were not raised at all.

The psychological study of religion is based primarily on the experiences of religious persons, on the analysis of our own minds and the testimony of other living men. If we take for our consideration the cases of the more advanced religions and particularly of Christianity, we find that an analysis of the psychology of religion shows that it can be traced to two different roots which co-operate together in producing the creeper of religion. The different roots are the influence of tradition and teaching in childhood, experiences like beauty, harmony, beneficence in the outside world and the moral conflict, and process of reasoning.

The traditional element in religion consists of the contribution of society and the social and family environment in which one is born and passes through his stage of adolescence. In the younger days, when the mind is susceptible to impressions and suggestions, coming from superior persons, the individual is often asked to suppress his reason and emotion and to accept the authority of anything that is written in the Holy Book or as instructed by the priest, preacher, the father and the mother of the family. At this stage the individual's own personality being at an ebb, he is naturally impressed by the bold and straight forward suggestion coming from persons of recognised authority. Thus the society imprints its first stamp on a mind which is naturally religiously disposed, religion being a human fact. It is through these traditional elements that the true essentials of religion become mixed up with ceremonial and ritual creeds, and even at an old age and after much scientific training, one finds it difficult to separate the essential from the non-essential parts of religion.

We must, however, also make note of the fact, that assuming the human mind, from the first stage is religious, we can see how the beauties of nature, her order and teleology could enkindle a religious belief, could make the individual more or less independent, and how the conflicting elements in his mind could lead him to reconcile himself to the changing ways of the world and the formulation of a consonant religious dogma. The experience of the world as the terrible and the beneficent, as production and destruction, the miserable and the

happy, might have produced in the mind a notion of chaos and uncertainty if we did not postulate the operation of a religious temperament and faculty, which could interpret the medley of conflicting experiences on behalf of a higher truth, which swallowed within itself the transient aspects of beneficence and destruction. Such an interpretation is not a mere act of reasoning. This reconciliation need not be regarded as the result of a conscious ratiocination, but as an act of intuitive apperception by which alone the various objective elements could be held together and given a meaning in consonance with the ideals of man. That we turn to God from the rapturous beauty of the world, or the depth of our moral experience, presupposes the activity of the religious category. The interpretation of the various objective phenomena, in consonance with the ideal of the permanent good and apperception of God within us, is, therefore, the product of the religious craving, without which it might have been almost impossible to account for the unity of all our experiences and the permanent ideals of our nature.

Yet there have been many who have exaggerated our appreciation of nature's harmony and beauty or the misery and suffering of the world and were led to formulate their religious ideas with exaggerated emphasis. Thus for example, the Buddhism, and many of the religious systems of India thought that in the world all experiences were painful; and that misery was the ultimate reality. Welfare meant annihilation. Novelists like Hardy depict the ruthlessness of fate, whose crushing attacks take no notice of our moral deserts. Even the most benevolent man with the tenderest heart, might tumble in the jaws of most terrible fate. Sir Francis Young Husband, in one of his book, describes how he lost his faith in God from certain painful experiences of accident. Many people are also known to have turned irreligious and left their former paths of extreme scrupulousness at the death of their dear ones; while reaction to the contrary is also known. There have been persons like St. Francis who regarded the world to be pervaded by God even though he deliberately made himself liable to much sufferings. But howsoever it may be, there is an abundance of optimism in religious beliefs. Even Buddhism, which regards all

experiences as painful, believes in the possibility of the extinction of all sufferings, and the whole of the Buddhistic discipline of religion is organised almost wholly with such a view before it.

With many persons, beauties of nature bring with them an appeal and a revelation of the Almighty. Thus Thoules quotes a passage of Goethe as follows—"When the dear valley is filled with mist about me, and the high sun rests above the impenetrable gloom of my wood, only rays stealing into the inner sanctuary, when I lie in the tall grass beside the tumbling brook and nearer the ground a thousand blades of grass attract my attention; when the hurry and skurry of the little world among the stalks, the innumerable incomprehensible shapes of the tiny worms and gnats are near to my heart, and I feel the presence of the Almighty who created us after His own image, the breath of the All-loving, who upholds and sustains us in eternal bliss, my friend, my eyes become dim and the world about me and the heavens are imprinted on my soul like the image of a loved one. . . . . . .". Thus with the emotional relationship of the natural world we feel it to be so much elevated and transcended that we realise as if we were in the presence of a person who is immanent through nature and for whom we feel love and reverence. Thus again, a passage from Lawrence runs as follows,—"That in winter seeing a tree stripped of its leaves and considering that within a little time the leaves would be renewed and after that the flower and fruit appear he received a high view of the Providence and the power of God which has never since been effaced from his soul." In the ears of the impressionable and the poetic man the whole world rings with the flute of the divine unknown. In the stormy night when the whole world is shaking with the rustling of leaves and the pattering of rain drops, the romantic religious person feels the message of his transcendent lover whispering into his ears the message of his coming and his crossing of the deep darkness to meet him on earth. The poems of our own poet, Tagore, are full of these mystic messages coming from almost every aspect of nature. He feels in the morning that in flowers, in the green leaves bathed with dew drops, and the torrent of showers, the emperor of the world appears before his eyes and in his

heart; in the darkness of night the stars from endless distance bring to him the message of the overlord; the story of the winter and the spring, of the falling leaves and the growing buds brings to him the message of the ever renewal of life through the cavern of death by which the immortality of the spirit is manifested to us. But on the other hand we have many writers like St. Augustine and St. Catherine who disdained the beauties of nature and turned away from them lest they might be tempted by their seductive charms and be taken away from God.

The peculiar logic of religion is such that as our mind turns in faith to God, it is pervaded with an emotion of exhilaration, of love and gratefulness, by perceiving the beauty, the order and the teleology of the world; so does the mind turn to Him, when it is faced with grave dangers, terrific catastrophe and impending devastation and destruction, a terrible disorder. In the religious scriptures God is thus adored both as the terrible as well as the merciful and the benevolent. The experience of beauty has often been given an intellectual form by philosophers, as a demonstrative argument on behalf of the existence of God. This has been called the aesthetic argument or the argument from design as may well be referred to in Paley's 'Natural Theology.' But the religious mind does not proceed in the intellectual form of an argument. With him the presence of beauty leads to a direct intuition of the love of God in his heart. Without this no amount of philosophical argument could give us the religious attitude. Many atheistic philosophers would be agreed to hold that there must be an unseen power which is the source of all energy and its distribution into the orderliness of the universe, but they are not prepared to hold that such a power is, also, what we may call, the good par excellence, or love and beneficence personified.. Yet it is here and here alone that we have the criterion of the religious attitude. It is here that religion differs from metaphysics or science. The secret of religion is in the religious attitude, in the religious psychology.

As we have said above, again and again, the fundamental characteristic of the religious attitude lies in the conviction of

the triumph of the 'good' over the 'evil' howsoever the 'good' may be conceived. Even in Buddhism, the Nirvāṇa as annihilation has often been described as absolute blessedness. The logical contradiction that is involved in conceiving annihilation as blessedness is bridged over by the religious dynamism, which overlooks the logical error and jumps to the ultimate faith. Rāmānuja, a great monotheist of India took great pains to show that no logic can demonstrate the existence of God, but that one could only realise Him through faith in the scriptures which represent the personal experience of the seers. Howsoever may be the apparent temporal greatness and power of Ahriman, he is sure to be vanquished in the end by Ahura Mazda. Even in religions which believe in the doctrine of eternal heaven and hell like Judaism, Christianity and the Islam, there is always a provision made by the omnipotence of God's mercy. Thus the fundamental characteristic of religion is a semi-conscious intuitive grasp of the orderliness of nature which forges us gradually to nobler and nobler spiritual shape until we become worthy of absolute blessedness.

The rational element of religion involves the rational processes which lead up to God as the first cause and the first person, who is the source of all things, and the fashioner of all destinies. It is needless for us here to enter into the validity of these arguments from the ordinary point of view of logic, for the religious psychology has a logic of its own. The religious point of view may not be confirmed entirely by the ordinary logic, but that is no proof that the religious point of view is false. In science we deal with the logic of many dimensions of space and accommodate continuity with discreteness in the same breath and hold that though the velocity of an electron may be known, its location is unknowable and vice versa, and we never feel that we are trampling the ordinary rules of logic by such assumptions. We hold that light is a corpuscle and also a wave and do not feel the contradiction that is involved in such a conception. So it is with the religious logic. The first start of the rational element is in the expression of wonder, such as is expressed in so impressive a manner in the Ṛgvedic hymn, where the poet asks himself; from where does this creation come,

who knows it and who can instruct us about it, even the great master of the show who exists in the high heavens may or may not know it. We find in the same Veda that various powers of nature are deified, to whom various functions are attributed; but when we come to a Upaniṣad, like the *Kena,* we find it stated in a nice parable that all the powers of nature derived their might and capacity from Brahman. The author of the *Kena* Upaniṣad was not satisfied with this, he held that this Brahman was the ultimate source, not only of all physical powers, but also of all biological and intellectual powers. Brahman is thus the only soul from which all the powers have been derived. In consulting the other Upaniṣads like the *Muṇḍaka* or the *Śvetāśvetara* we find the same idea repeated and Brahman is compared with fire sending forth sparks which represent the whole universe and the soul of all beings. He is like the spider, who has woven round him the web of the animate and the inanimate. In some of the other important Upaniṣads this power is described as being of the nature of thought, infinite and eternal, which is the only truth, in the manifold world of our experience. Thus the rationalising process remains hidden in the mind of the religious man and by a sort of personal revelation and intuition he jumps at a unity which is so difficult to be attained by scientific course of logical argument.

The Sāṃkhya-yoga, however, turns to a teleological argument which in the hands of the modern theologians has undergone much elaboration and thoroughness. The kernel of the teleological argument is the chain of purposiveness which binds even the highest man with the inanimate objects of nature. The entire geological evolution of earth, its passage to various degrees of temperature, humidity and pressure giving rise to the formation of the earth's crust and determining the climate, distribution of land and water, the various glacial and other epochs, through which it passed; the evolution of life as ultramicroscopic microbes, the unicellular amoeba and the multicellular animals leading to the evolution of various types of animals which succeeded one another in the various epochs of earth's history; the evolution of the Neanderthal man, the

palaeolithic and the neolithic man and the ultimate evolution of the higher and civilised man, their epochs of culture and history, their inter-racial influence, their groupings in hordes, tribes, folk and nations, their animal propensities and their social virtues, their superstition and rationalism, are all connected together with their physical and social environment, their food and climate, their habits and necessities, their hopes and their fears, in a particular manner. This points to the fact that the purposiveness of any one of the constituents is not only complete in itself, but always goes beyond itself to the formation of other entities, and we find an inter-connecting chain of purposiveness. This connects the inanimate with the animate, life in lower forms with those in higher forms, life that is outside society with the life that is inside society, the life of the society as a whole with the individual that is a constituent of it, and vice versa in such a manner that the explanation of any category of existence can only be sought and obtained by completing the whole course. The mechanism of the nature of human body is such that it behaves as if it were surcharged with intelligence in every part of it, and in our biological approach we have shown how nature works miracles in living bodies, which is inconceivable, even now to our human intelligence. This purposiveness which always holds the category of one within the other and thus connects the reality of the manifold into one, naturally points to the assumption of the supreme purposiveness that surcharges the whole universe. As purposiveness is the most fundamental characteristic of personality, a religious mind finds here an obvious indication of the reality of a supreme person, who holds his supreme purpose of the universe in the fullest development of man, the highest being of nature. The Sāṃkhya-yoga thus argues that the whole creation is for the evolution of man. In contributing to the evolution of man to his highest perfection, each part of nature undergoes its culmination of perfection in its own type. The moral and religious fulfilment of man, is thus the ultimate goal which the whole nature is conspiring to achieve.

It is needless for us here to discuss the validity and the logical sufficiency of these arguments. In religion we do not

come with the spirit of a scientist who has ultimately to base his conviction on the evidence of his senses, but in the way of an emotional poet who holds within the halo of his emotions a ring of rationalistic argument undifferentiated from it. We have thus to admit our religious personality as a separate emergence over and above our social personality which is responsible for our religious outlook. We do not always believe all that is logical, and even if we do believe so, such beliefs are always associated with practical utilities which are entirely beyond the scope of the religious situation. Our religious personality moulds our emotion and will, in a particular manner such that even the semblance of a logical argument is a sufficient basis for our logical satisfaction. The illogical and the irrational vanish away in the light of the emotion and the will. In this also a religious man is like a poet or an artist, whose logic delves deep into the mystery of his emotion, and which finds its food in the exhilaration and freshness, joy and liveliness, which the religious, the poetic or the artistic construction brings.

It is generally supposed that rationalisation plays a great part in producing conviction. In our vanity of reason we often declare ourselves as prepared to believe what is rational and reasonable, but in reality conviction often precedes reason. We are often first convinced and then find reasons to justify the conviction. Conviction proceeds from a softening of the mind through emotion and the will to believe. This becomes apparent when we place in review before our mind our convictions in the past, and the reasons that we offered in support of them, and later on how with the change of belief the arguments, that appeared so cogent in the past appear to be flimsy.

We do not mean, however, that intellectualism plays no part in the formation of our beliefs. In those fields in which no practical interest is involved, intellectualism often determines belief, even though traditional elements in the mind may often resist the growth of any new belief. Thus in the case of the relativity theory the change of outlook was so great that for a long time the scientist resisted it. As proofs accumulated slowly the old traditional conception of space and time had to

be shaken off. But in those fields in which we are concerned with practical life, pure intellectual arguments do not often have any appeal to us. Beliefs thus are often spontaneously generated by traditional ideas, teachings and environment and the inner optimistic needs of the human personality. It is here that the religious personality helps us to weave our religious beliefs.

As the religion may be supposed in our view to be an emergence from psychological nature as a whole, it often behaves in its total integrity as a whole. We may thus regard the religious life as a sort of a new instinct. Starbuck speaks of religion as a deep-rooted instinct and compares it with hunger and desire. Others regarded religion an expression of the sex-instinct. This view has been maintained by a school of American writer who style themselves as erotogenesists. Religion is also regarded as founded on the herd-instinct. But the point that we wish to urge here is that it does not proceed from any of these instincts. But it derives its energy from the roots of our instinct which preserve within themselves the energy of our vital being. The energy of life is manifested in self-preservation and race-preservation including race production. The emotions associated with them receive their response from the vital nature of our being.

The energy of these instincts is sublimated into a new kind of activity and this again further reacts. That the instinct of self-preservation forms a fundamental aspect of religion, is well-established by the doctrines of immortality and resurrection, faith in providence and in the grace of God and the ultimate blessedness that is to come. About the problem of the sex-instinct and religion, Theodore Schroeder thinks that all religion is a misrepresentation of sex feeling. He therefore discredits the religious life. He holds that all religion in its beginning is a mere misinterpretation of sex-ecstasy, a case of sexual perversion, 'God is love' means God is sex-love. But though there may be some truth in these sex theories, they fail to show that religion contains nothing but sex-elements. As psychologists we must rid our mind of the prejudice that there is something inherently disgusting about the sex-instinct, which

makes the mere suggestion of any relation between sex-instinct and religion revolting. There is nothing that is morally evil in the instincts themselves. Moral value lies in the due subordination of the instincts for the benefit of the whole. The sex-instinct may be at the root of many of the highest expressions of human character which at its best is called love and its worst is called sexuality.

The holders of the erotogenesis theory argue that the period of adolescence and early youth has often been seen to be periods of conversion. Religious instincts often manifest themselves at that age. Again it is pointed out that the great emphasis that is given on chastity and the repression of sex-instinct in religion, also, points to the same direction. It is also sometimes found that ill-controlled religious instincts often show themselves in sexual aberrations. Many religious rites are associated with sexuality. Religious excitement often marks the periods of the crisis of sex-life. The expressions of religious emotion particularly of the mystics are clothed in the language of human love. Religious excitement passes into sexual license in some religious cults. But these assertions are not always correct. Often times religious excitement is found in childhood, middle age and also in old age. Though the language of ordinary love is current among the mystics, it is not always that they talk of their affection of God in terms of sex-love, though they may employ the flowery imagery of sex-love to show the intensity and depth of divine love. The mystics do not demand only the repression of sex-feeling, but also the repression of other feelings such as egotism, love of wealth, etc. Meekness, fasting, solitude are also regarded as essentially desirable for the mystics. Thus it is impossible to identify religion with sex-instinct, but it is possible that the energy of sex-instinct is sublimated and transformed and shows itsef as a constituent in religious feelings in some of its forms.

We arrive at the conclusion that though sex-instinct cannot be regarded as the whole of religion or even a major part of it, it may certainly be regarded a part of the instinctive foundation of religion. It shows itself more prominently in adolescent conversions and in the mental pathology of many of the mystics

which reveals its superfluity in intoxication of emotions. What I mean is that the sentiment of religion is partly built on that aspect or function of mind that we call the sex-instinct. It is wrong to suppose that the association of sex-instinct with religion has any revolting or degrading effect. Human love has often been spoken of by theologians and mystics as a precursor of the mysterious experience of divine love; the saint is the lover purified, refined and perfected. In the well-known mystic poem 'Yusuf and Zulekha' by Jami, Yusuf urges Zulekha to love in the following manner:

"Though in this world a hundred times thou trust,
It is love alone which from thyself will save thee
Even from earthly love thy face avert not,
Since to the Real it may serve to raise thee,
A sage (so heard I) unto whom a student came craving
 counsel on the path before him,
Said, "If thy steps be strangers to love's pathways,
Depart, learn love and return before me."

In the same way we may refer to Jung's 'Psychology of the unconscious' in which he tries to prove that religion is a regression to the infantile dependence on the father and the mother. Dependence on some superior power has often been spoken of as being the definition of anthropological religion. But though such dependence is almost of infantile and helpless character, it is found among many wise and self-reliant mystics, moreover it cannot be regarded as an indispensable constitutive definition of religion. The Tengalai branch of Rāmānuja sect in India believes that the devotee should so resign himself to the will of God that he may be compared with the kitten of a cat-mother who is taken from place to place by her in a thoroughly self-resigned condition. We read also in the writings of Julian of Norwich that she craves that she may be safe in the arms of Jesus and finally rest in Him. But the psycho-analysis often traces the dependence in religious feeling to the Oedipus complex through the repression and transformation of sex-instinct to an

amazingly extreme degree. Thus the Freudian says that the idea of God, the father, is the father's substitute adopted by the adolescent with a dominant Oedipus complex who finds the actual father quite inadequate for his purpose. The virgin Mary is specially an attractive object of worship because it satisfies the unconscious longing of the infant to supplant the father. I need not multiply examples to illustrate the crude dogmatism of unbridled imagination obsessed with the ideas of incest as omnipotent for all explanations. The psycho-analysts assume that the fact, which is reached last in a chain of free association from a given idea, is the cause of that idea. This assumption seems to us to be wholly unwarrantable.

We may pass on now to the psychology of worship and power. Worship implies an establishment of relationship with God. Such a relationship may be established either in masses, where group feelings operate or the feelings operate in individual capacity, and an individual may feel his relationship with God even while he is in company with others. The mode in which individual approach is made is different from mass worship where the crowd feeling contributes a new element to the form of worship as in the case of services made in churches or mosque. Worship is sometimes distinguished as being objective and subjective. The objective worship and the subjective worship, however, cannot be entirely distinguished. In the Hindu temples an objective worship is made by the offering of flowers and fruits and articles of food, there is also an essential and indispensable element in the form of dhyāna or meditation which marks the subjective side of worship. In Christianity the offering of the Mass may be regarded as objective, and the delivery of the Sermon, marks the subjective side of worship. If worship means the establishment of relationship with God, the objective part only prepares the ground, while the subjective part is what really constitutes the character of worshipfulness With most systems in Indian worship, dhyāna is supposed to produce the desired communion. Meditation is a three-fold action involving the effort to draw the mind from the fleeting objects by which it may be constantly attracted, the effort to arrest the mind on the desired object and the final one-

ness through contemplation (samādhi). As mind constantly moves from one object to another, it is extremely difficult to arrest it from the diverse objects to which the mind tries continually to fly, and keep it constantly buried in the desired object. This double effort, however, is supposed to lead to a state of equilibrium, which we may designate as communion in which the mind is trained to flow in one direction and one alone. In religions, which admit God, this communion is with God; but in religions, which do not admit God, this communion is supposed to be with the nature of reality. In the terminology of yoga this state of communion is called samādhi. In those religions in which emotion plays a great part the intellectual element and the element of effort is minimised and replaced by an abundance of emotional flow, which carries the mind by force as it were to the desired object. The communion, when complete, arrests the ordinary mental activities and a state of unconsciousness with regard to externals, sometimes associated with ecstasy, is displayed. It is a state in which the person remains internally conscious of the object of his communion, but externally he remains insensible to the solicitations of the sense objects or other ideas.

Worship differs from prayer in this that the latter is supposed to be the communication of a desire to the deity for its fulfilment. The communication may be made through speech or, as the deity is supposed to know everything that passes in the mind, it may be made also mentally. Many people in modern times think that efficacy of prayer is to be found in spontaneous auto-suggestion. It has been said that "when an idea imposes itself on the mind to such an extent as to give rise to a suggestion, all the conscious efforts which the subject makes in order to counteract the suggestion, are not merely without the desired effects, but they actually run counter to the subject's conscious wishes and tend to intensify the suggestion." Reflective auto-suggestion is a process in which, by the discipline of the will, one combats this spontaneous auto-suggestion. The difficulty, however, is that in the case of reflective auto-suggestion the emotional element associated with spontaneous auto-suggestion is generally absent. This makes the reflective auto-suggestion hard of accomplishment. The more one wishes that one should go to sleep, one

finds it difficult to get into it. The way to go to sleep is to resign oneself without thinking of it. The exercise of pure voluntary attention often rouses an energy which baffles the free-flow of the psychic states. The best way of making an auto-suggestion consists, therefore, in relaxing the mind in a particular direction, and to keep the mind permeated by a particular psychic temper. The Nancy school practices this auto-suggestion by contriving to get the desired ends through some formula repeated over and over again, absolutely mechanically and without any exercise of deliberate will. This is also found in the counting of beads and the muttering of mantras which is advised as a discipline in many religions. The Nancy school recommends that the body should be in a comfortable position. This is also advised by yoga by enjoining the āsana which means a comfortable posture of the body (sthirasukhamāsanam).

But auto-suggestion seems to be of no avail either in explaining true religious prayer and the true employment of yoga as a means of self-elevation. The prayer of a sincerely devotional man is not for curing a disease. The true devotional prayer can hardly be distinguished from emotional communion out of the pangs of desire of an earnest spirit. It seems that somehow, some perennial source of life and soul is stirred up from within through prayer that gives a new strength and restores the lost balance. The internal loss of balance produces despondency, sorrow and fear, and lowering of the vital energies. It is difficult to say what exactly is the psychological mechanism by which an inner prayer, which may not always be in the form of an appeal to a higher being, but may be a call, for the highest in us which, with the fire of emotion and will welded together, rouses in us our dormant inner being and overflows it with new energy, trust and a sense of security, refreshes the life and purifies it from uncleanliness and lethargy. There is another kind of prayer, called sometimes the prayer of quietness, in which the inner energy flows out and overfloods the mind. Thus St. Teresa says (The Interior Castle IV.3.7), "In the prayer of quiet when the water flows from the spring itself and not through conduits, the mind ceases to act; it is forced to do so although it does not understand what is happening and so wanders hither and thither

in bewilderment finding no place for rest. Meanwhile the will entirely united to God, is much disturbed by the tumult of thoughts; no notice, however, should be taken of them, or they would cause a loss of a great part of the favour that the soul is enjoing. Let the spirit ignore these distractions and abandon itself to the arms of divine love.......In the prayer of union the soul is asleep, fast asleep, as regards the world and itself, in fact, during the short time this state lasts it is deprived of all feelings whatever being unable to think of any subjects; even if he wished. No effort is needed here to sustain the thoughts, if the soul can love, it knows not how nor whom it loves, nor what it desires. In fact it has died to this world to live more truly than ever in God." St. Teresa says again in another place, "When He intends ravishing the soul, he takes away the power of speech, and although occasionally the other faculties are retained rather longer, no word can be uttered. Sometimes the person is deprived of all senses, the hands and body become as cold as if the sense had fled, occasionally no breathing can be detected. This condition lasts but a short while; I mean, in the same degree, for when this profound suspension diminishes, the body seems to come to itself and gain strength to return again to this death, which gives more vigorous life to the soul. This supreme state of ecstasy never lasts long, but although it ceases, it leaves the will so inebriated and the mind so transported out of itself that for a day or sometimes for several days such a person is incapable of attending to anything but what excites the will to the love of God."

Few people can deny that in the expression of religious experiences a new set of energies, emotions and will are let loose and produces a turmoil in the system. But this does not necessarily mean that the source of energy is transcendent. It is also wrong to say that if all these facts can be explained by the ordinary psychological laws, there is no proof of influence of God in our lives, for God does not come as a person outside our psychological machine, he is the 'antaryāmin' or the inner controller, He sits, as it were, in our heart. This He, this Person, this love of God is the projection of a truth in a symbolic personality and it has a sort of emergence out of the religious aspect of our

being. Its reality is not of the order of scientific reality. Even among the sciences we find that reality is not always of the same order. The so-called electric waves that form the ultimate physical reality has neither taste nor smell, and are thus entirely different from the physical objects of our everyday life. So again life reveals phenomena which are entirely of a different order from the physical material on which it is based. So religion is an emergent factor in human life that expresses itself in certain beliefs and dogmas, and certain emotions and ecstasies, and rouses certain will power to remodel the life on a newer and nobler line and often projects an ideal in the form of a person designated as God. The dominant expressions of the religious personality are often changed by reflection into a personal being like God having personal relations with us. What the mystic experiences as a love of God need not necessarily be interpreted as a physical existence of a God who loves us like a human being. But the intoxication felt out of the religious feeling is akin, in some of its pathological features, to love and this is naturally described as the love of a transcendental person. The testimony of the existence of something transcendental, which we may have through religious experience, is a proof not of a physical God existing in time and space, but of a spiritual being, who reveals himself in our hearts. It is for this reason that we find that in certain religions this ideal, this spiritual existence is not projected as God, but as the sumum bonum, while in others it is expressed in a pantheistic manner as God, as all. Our psychological investigation thus leads us to the conclusion that the God of religion is a spiritual God, who is directly concerned with remodelling, controlling and ennobling our life in trust, sympathy and optimism, which is not disclosed as a constituent of the psychical factors, but is a projection of our religious being or religious personality. Whether this being or this ideal, which is revealed in the mind, is the same as the unknown source of the energy of the world is more than what a few religious persons may attest. It is no doubt true that when reflection is added to revelation of the religious spirit, it often happens that the religious person exceeds the bounds and makes metaphysi-

cal assertions that the God of religion is one with the God of metaphysics and the God of science as the ultimate source of all energy and life.

CHAPTER VII

RELIGION AS SPIRITUAL EXPERIENCE

We have seen in our previous chapter that religion manifests itself through our psychical states, conscious and unconscious, through our tendencies and temperament, our emotion and will. It has always been held by most people, who admit religion, that religion is a spiritual fact. Our main difficulty in this connection is with regard to the meaning of the word 'spiritual'. An idealistic philosopher is he who thinks that reality is spiritual; the phrase 'reality is spiritual' has often been interpreted as signifying that reality is mental. Almost all idealists believe that all that we may call real is either wholly mental or has a substantial contribution from mind for its interpretation; but it is obvious that we cannot call religion spiritual in this sense, for, to say that religion is mental, would merely mean that it has no objective basis. In some sense our scientific knowledge of external things contains an element that may be called mental and which has hardly any objective ground based upon the senses and their reports. Thus space and time, or the causal relation, forming the most indispensable condition of all our external observation, are not entities, which report to our senses about their existence. They are somehow or other exported to the external world from the mind. Whatever we may understand by the inner mind, and howsoever we may be unable to define it, we know that we can always distinguish it as an internal category or event, without the association of which the external world cannot manifest itself. But unless we take the external rituals, the ceremonials and the rites, religion in its subjective aspect consists of constituents which are psychic products, beliefs, emotions and volitions. Still there is something in religion which makes the projection beyond the data of psychology; such a projection may be called transcendental in the sense that it postulates the presence of a beyond,

an ideal, a transcendent apperception, which is not only indispensable, but which forms the most essential kernel of all advanced religions. It is no doubt true that so far as the transcendent is expressed in and through the psychic state, it is itself psychical, and it is impossible to go beyond one's own mind, for that, which exceeds the limits of mind, has no connection with it, and is naturally unrelated to mind and therefore, its existence should have no place in our consciousness. It would be as if it were nothing to us, for, that, which cannot be related to our consciousness, cannot have any apparent being or existence. In religion we feel that we are in touch with something which pulls us up and which is beyond the sphere of the explored field of our consciousness. Whether this transcendent category is something external to us, or whether it lies buried within us, is more than we may be expected to answer. The experience of transcendence is almost a mystical fact. We have seen that there are people who connect religion with neurosis. Others again say that religion is intimately connected with sex-life, but it is quite useless for us to enter into these questions and hold any discussions on the same, because religion appears to us not in the capacity of the constituent conditions, which make religion possible, but from the point of view of a separate category, separate emergent form, which shows itself, shows its nature in its own integrity and uniqueness and not in a combination of simpler constituents.

It has been pointed out by the opponents of religion that most of the religious men are in some way or other neurotics, auto-intoxicated or hereditary degenerates, and that therefore their experiences may be attributed to physiological or neural causes. St. Paul was epileptic and his vision on the road to Damuscus is regarded "as a discharging lesion of the occipetal cortex." But these arguments are of no importance, for, assuming that they are correct, they only indicate certain physiological conditions under which the religious experiences may arise. If the religious person has a certain kind of physiological datum, so the atheist also is responsible for his views through certain other kinds of physiological datum. The liver of the atheist probably determines his courage and stout opposition to traditional

views. So the determination of any mental state or beliefs by any particular kind of physiological conditions is no reason for their acceptance. That certain beliefs and ideas are regarded as having greater value and worth, is something which is beyond the mere states; and no one had ever the audacity or courage to prepare a gradation of psycho-physical processes that determine relative worth and value of the mental states associated with them. Every mental state may have a physiological basis, but that is no ground for discrediting the validity of that state. The idea of worth and value signifies a sense of high and low which is neither spatial nor temporal; the idea of this value has no counterpart in the objective world. The ideal of goodness and value cannot often be decided by any other criteria, and goodness often stands by itself. We do value happiness also in itself, and our valuation is so ultimate that we do not need any justification of it, nor are we capable of justifying it by any other means or by reference to any other criteria. But happiness, particularly in the sense of pleasure, has a biological need, and it has been said by many philosophers that what is favourable to life is pleasurable and that which is unfavourable, painful. Our whole biological tendency for self-preservation may be such that we seek pleasure by instinct and this instinct is ultimate and primary. Its energy is almost original with life and cannot be regarded as derived from any other source. It is for this reason that we cannot explain why we value happiness, but it is found that we often value goodness more than pleasure. Thus James says, "Inner happiness and serviceability do not always agree, what immediately is felt most good is not always most true, when measured by the verdict of the rest of experience. The difference between Philip drunk and Philip sober is the classical example in corroboration". If merely "feeling good" could decide, drunkenness might be the supremely valid human experience. The consequence of this discrepancy of the two criteria is the uncertainty that still prevails over so many of our spiritual judgments. There are moments of sentimental and mystical experience that carry an enormous sense of inner authority and illumination with them when they come. In the case of ethical judgment also, except in the theo-

ry of the utilitarians, the good and the pleasurable are not always felt to be identical. Even a utilitarian like Mill makes the distinction between the higher and the lower pleasure. He says 'It is better to be Socrates dissatisfied than a pig satisfied.' He adds as his reason, that Socrates has knowledge of both the contents, while the pig knows one side only. But this is hardly true. No good man, who denounces sins and sinful habits, had ever any acquaintance and such familiarity with those sinful habits in the manner in which a real sinner had it. The drunkard, who is addicted to drinking for years and years, is the only person who is competent to judge about the pleasures arising from it and the indispensable necessity of drinking as a source of pleasure. Again, when such a person under the influence of temperate persons gives up drinking, it is not possible that all of a sudden, he discovers the pleasurableness of the abstention from drinking. Alcohol and opium produce such a morbidity in the nerves that continual excitement is the only mean of getting pleasure. That the drunkard and the opium-eater get pleasure by over indulgence and sorrow for want of it is a fact known to all. It, therefore, seems certain that both Socrates and the piggish man have in themselves some other criterion and sense of value than that of pleasure. Socrates can lead his life in accordance with that sense of value, while the piggish man becomes induced to follow his course of life under the dominance of a lower sense of value. The hedonists and the utilitarians, regard pleasure as judged by its characteristics of quantity, durability, purity, fecundity and propinquity as the ultimate standard or value according to which our conduct should be moulded. But they cannot, consistently with their programme, bring in the question of quality. Since they admit no other criterion but pleasure, they ought not to bring any distinction between a higher and a lower pleasure, between the pleasure of reading Hamlet and drinking wine. The fact, that even at the risk of inconsistency the most thoughtful of the hedonists have been forced to distinguish between a superior and an inferior pleasure, proves the truth that there is a sense of goodness which is not identifiable with pleasure. This sense of goodness seems hardly to have a

content, it is a projection of transcendence of a new emergent idea, and the more we try to analyse it, the more we fail. It is a sort of an original instinct which is neither capable of proof nor requires any proof. Kant realised its nature as a pure form, a pure sense of oughtness devoid of any content, but though he realised that it was pure and unanalysable in its nature, yet he tried to characterise it as categorical and imperative, and distinguished it by its uncontradicted universality. It is here that our knowledge of anthropology and comparative morals are in conflict with the ethical theory. We not only believe in the existence of such a sense of transcendence, but we do believe that there is an order of its evolution and it is not universally the same.

But we are forced to admit that the advanced man distinguishes himself by his character of transcendence. It is here that we find the spirituality of man. This spirituality of man carries with itself its own norm; and a spiritual experience, howsoever it may be rare, has such a superior strength that it can assert its own excellence over the rest of our experiences. It is like the refreshing bath in the cold icy water of a river, descending from the glacier, after the fatiguing heat of a summer noon. Sometimes it so happens that the nature of the experience and its content cannot be translated in terms of our thought, which contains pictures and abstractions, and where each term is limited by its connotation and denotation, but still the experience as overflowing the soul, cannot be denied. It is like the feeling of health in a youngman, the sprightliness of the sportive, the joy that spurs the nightingale to stream its voice out into the world. It is like the first onrush of south wind at the advent of the spring and may be absolutely unrelated to the previous psychical history of the individual; when it comes, it fills the dark caverns of the heart with the silvery beams of joy, which makes our inner springs surge forth. It may be said that an eloquence of imagery is only an artifice for hiding its actual unreality, but this implies the theory that all that passes through our minds can be expressed in words and so words have been employed by many persons to express it, but unfortunately such an experience can only be ex-

pressed by way of imagery. In poetry the poetic joy sends out like sparks from fire, the pregnant words dancing in rhythm; even then these can hardly express the nature of the joy felt within. True expression in poetry has, therefore, been often defined as suggestion, but the word suggestion here is not used in its common meaning. The suggestion is only contrived by creating an atmosphere such that if the reader had ever experienced that joy, the same may occur to him by the influence of the atmosphere created by the magic of the words, imagery and rhyme. Rhyme is intended automatically to rouse similar physiological conditions by the music that it produces. In the case of the expression of the transcendence of spiritual experience, also, it is natural to be expected that a person who never had such experiences will understand nothing by the words of the experiencer. The fundamental point that I wish to emphasise here is, that in the feeling of a spiritual experience we have a state of psychosis which overflows the entire psychical being. Our ideas and thoughts have an atomic structure. We use words having a definite and concrete meaning, the contours of which are definitely demarcated. We combine them with terms signifying relations and give them a molecular structure by dependent adjuncts and clauses such that each proposition stands out as a molecule. These again, are connected with other propositional molecules until we can form a whole, which has a definite and total meaning. In the actual process of our thought this atomic and molecular aspect is often superseded by a total enlightenment, which in its own nature cannot be expressed in the manner in which it appears in the mind. The whole enlightenment can be expressed unfortunately only by the atomic and the molecular method in language. In one moment we may live through an idea which can be given expression to only by pages of eloquent language. This is a defect of the expressive power that is associated with language. We thus see that not only our moral and spiritual experience, but in our experience of ordinary emotions and thoughts, the appearance of a complicated content in the mind and enlightenment, is entirely different from the order of its expression. What was felt in a moment has to be cut into shorter and shorter pieces,

arranged and shaped before it can stand as a fairly correct symbol of what had appeared in the mind. There is, therefore, nothing strange that the experience projected through the whole of our being and our psychosis may carry with it a refreshing character, and an impression of superiority inexpressible in words.

The chief significance of man is in the enlightenment of his spiritual life. We can thus see that the word spiritual here does not mean merely mental; it means an experience which, though based upon our psychological contents, transcends it in the sense that none of the contents can severally or jointly carry it with their connotation. It is for this reason that a special word 'spirit' or the 'spiritual' is in use for signifying it. Man perceives within himself evidence of a reality other than that of sense experience and its abstraction. It has a totality and concreteness which is incapable of being analysed and therefore expressed in language. It is beyond the scope of our concepts. It is concrete yet undefined. As it depends on experience and is unanalysable into parts, and as it is impossible to co-relate it with the intellectual categories of our mind, it is almost impossible to give any reasoned proof of its existence. As a matter of fact each mind is so secluded in its nature, that no mind can have any direct revelation of the contents of the mind of other people; yet we cannot be solipsists, and have to believe that other people have also minds which experience. The proof of the experience of our mind is undeniable to ourselves and it is impossible for us to bring to others any direct proof of our private experiences and the exact manner of their occurrence.

But the spiritual experience within us, though it may have undergone an evolution in the different stages of the development of the human race, and though it may differ in nature from person to person and may also vary in the same individual at different stages of its growth, yet it manifests a homogeneous nature and cannot be analysed in simpler forms of experience of which it may be regarded as a complex. It is a ceaseless unifying activity showing itself in the different departments of our inner functions.

In the diverse kinds of our biological activities such as

those for our self-preservation, in a direct or indirect manner, the self in the savage and the infant is concentrated on the needs of the body, particularly to the appetitive parts, such as hunger and thirst, sleep and rest, the preservation of the body from injury, and the like. It, however, gradually grows and integrates its experiences until it can evolve within itself a sense of personality, a sense of its separateness from other persons and objects and begins to feel that it can independently respond to the stimuli outside and the social environment, within which it is placed. Through language it associates itself with other fellow men and feels itself as a member among others. Philosophically speaking, it is most probable that we are aware of larger majority of the perception of our mental events by introspection. But we do not perceive in reality the physical objects or other people's minds which are but projections of our own psychical nature. I have a self-perception of myself as 'I', and that also, in my opinion, must be regarded as an internal projection of our psychosis, just as the external world is an external projection of the same psyche. It is true that in adult experience I know sufficiently of myself as 'I' to distinguish it from everything else as 'You', yet my knowledge of 'I' may be as dark as my knowledge of 'You'. The 'I', to which I refer, has often a direct reference to the immediate psychical state that is enlightened with an umbra and penumbra extending into the infinite of which we have no direct knowledge. It is the centre of illumination which we call consciousness or self-consciousness that we refer as 'I'. Thus it is difficult to have a sufficient exclusive description of 'I' as that which is aware of any mental event. The point may be raised that I may get an exclusive description of the 'I', in the judgment, 'I am aware of my awareness'. Here also the difficulty is not obviated, for it is difficult to assert that the 'I', that was having the awareness, was the same as the 'I' that made the judgment. But the 'I', that made the judgment, can never be known by itself, and by the time that another awareness knows the 'I' that made the judgment, the 'I' who made the judgment has passed away and is no longer judging. McTaggart says that the judgment 'I am aware of X', always means that the person who is aware of X is also the person who makes

the judgment. I know directly what 'I' is, for otherwise I cannot know the 'I' merely by description. But here also the whole proposition is liable to objection, for, who can guarantee that the 'I', that had the awareness, was the same 'I' that made the judgment. I may know the 'I' by direct acquaintance, but whenever we try to pass a judgment on it, we have another 'I' and that the two are the same, cannot be proved. So in our acquaintance of the self as 'I', in a concrete case as 'I am aware of the blue', it would remain only as an experience which cannot correctly be represented by any proposition at a later moment, for if the 'I', that has the awareness, is manifested to us by nothing else but by virtue of that awareness, the 'I' that makes the judgment must also be known by the event of my judgment; and since the two 'I's are manifested by two different events and since the two might not have happened at the same moment of time, it would be difficult to identify the 'I' of the awareness, with the 'I' of the judgment. Dr. McTaggart says, "We have good reason to assert that I can perceive myself *i.e.* if I can know myself at all. For, it would be impossible for any one to believe that the self could be known to deny the truth of some proposition which takes the form, 'I am aware of X' ". But we have seen that such propositions cannot be justifiably accepted unless I can be aware of *i.e.* perceive myself. My point here is this, that the self is undoubtedly perceived at the moment of any awareness, but such a perception is nothing else but a polarised consciousness which turns to the self and the object at one and the same moment. Since in the stream of consciousness, we have a stream of polarised awareness, the so-called self is only perceived in the flow. There is no ground whatsoever to affirm that there is one unchanged and unchangeable entity like the self to which all awarenesses attach themselves. It cannot also be asserted that there are no psychical states which do not rise up to a level of consciousness and that every consciousness must always reveal itself in a polarised form. We hold that there may be different levels of psychical states underneath the conscious state, which, without rising to the conscious level by their very existence, modifies and colours that part of the psychical state, which has come into illumina-

tion. For this reason, two awarenesses which have the same or similar content may differ with regard to their meaning and purpose in the psychic history, in accordance with the varying context of under-levels of psychical states which may be qualifying them.

It is our contention here that our psychic states, moved in diverse ways by various fundamental activities, project selves of different nature. Thus the self that is merely associated with the awareness of a cup of hemlock on the table, and also that it is prescribed that it should be drunk, is different from the reacting self that would either drink the hemlock or fly away. A Socrates may abide by the previous histories of his ideas that it was his duty to obey the dictates of the state, but an ordinary person with a different psychical history may behave in an entirely different manner.

It is our intention here to say that the psychical changes in the mind go on automatically, determined by their own history and inner urge, and, even when a particular state comes to be illuminated, it is not always that the self or the 'I' is definitely and concretely illuminated. The consciousness of the self often requires a second moment of reflection leading to the internal polarisation. Each moment of conscious thought is pregnant with diverse meanings as regards action, emotion and the feeling and the nature of the personality.

It has already been said before that our notion of self is, in the first instance, limited to animal propensities and biological nature, but gradually it outgrows it. And the inherent social instinct, working from the moment of birth, together with the elements of social experience that it can pick up from its environment, the benefits that one receives from the parents, the members of the family, the training that one receives from one's teacher, the punishment and reward that one gets for performing disapproved and approved acts, studies, traditions, examples, contact with larger and larger society, by the actual mixing or through books, through works of art, become so fused together as to form an altogether new personality which is so woven up that every thread of it is a thread of social life.

Such a personality is surcharged with social beliefs, aspirations, fears, apprehensions, ideals and the like. It is for this reason that catering for the needs of . the society, acting in the manner in which the society desires us to act, its service and approbation become the most important need and object of attainment for the individual. The individual self here is only a part of a bigger social self. It is like a single cell which has to work for the group soul and by which alone it can sustain and maintain itself. The existence, ideally of the entire human society and more definitely and concretely the family, the immediate environment and the nation within us manifests itself in directing our social self on the lines on which the society has proceeded and developed. Our individual social self, therefore, has to work in harmony and in the interest of the bigger social self which unconsciously has woven the structure and life of the individual social self. When, however, it so happens that in any particular individual there is a conflict between the biological and the social self, the conflict must be broken in the interest of the latter, if the individual has to keep his place in society and is loyal to the norm set by it. Though we speak here of the two selves, the biological and the social, and as a matter of fact, we may speak of many selves, yet this multiplicity is only a matter of abstraction. In the self that works, the difference of the so-called biological and social selves, enters into such an intimate connection and is so integrated that there is no hostility or diversity among them. It is only when there is an inner conflict that the two selves appear to manifest their opposing characteristics; whenever such a conflict arises, the demands of the social self is felt, as a norm, which should guide and control the appetitive soul. The sense of the norm belongs to a category different from the content of an idea. It is a characteristic which suffuses and interpenetrates the entire complex self. It cannot, therefore, be presented before the mind in the form of a content, but it manifests itself in its peculiar way, as a sense of value. Whatever permeates the large part of the psychosis and becomes assimilated within the self, as an integral constituent of it, gives a notion of its pervasion or assimilation. The psychical repre-

sentation of this pervasion cannot be polarised as a concrete awareness, but still its unifying force, the bonds with which it has integrated certain types of psychical contents, are bound to find their expression in the case of any conflict, with any other such unifying force which unites certain other groups of psychical contents. Thus our appetitive functions become related together and form a whole by themselves and as such the unity, thus acquired, behaves as an emergent entity, a whole, which we may for the sake of convenience, designate as the appetitive self and which is, in that way an important part of the self-complex. The fact, that the appetitive contents are bound together and behave as a whole in the self-complex, creates for it a demand of its own and this is understood as a sense of value. We value our biological pleasure and the self-preservative instinct, but the unity that holds together the psychical elements, which forms the complex social self is wider and bigger than the unity established by the appetitive self. The complex of a social self behaves as a whole and tries to maintain and sustain itself at any cost. Thus self-maintenance of the social self is felt again as associated with a higher sense of value than that of biological demands. We thus find the rule that the more uniting, the wider and the later emergent the force of unification is, the greater is its transcendence over and superiority to, the earlier and narrower uniting agencies. For this reason we may have a series of value senses, the economico-appetitive, the economico-social and the religious and the super-moral.

Our theory of self and the sense of value are thus based on a few fundamental notions regarding the nature of the self. We assume that behind the state that comes to the conscious level there is a whole series of mental states at different levels, which do not operate merely in discrete forms as loose atoms, but groups of these states, which are akin to one another and can be rolled up in a particular mode of psychic activity, behave as wholes like formed molecules or crystals and the different constituent entities that may be formed within the self-complex. Different constituent elements as they enter into the psychic history are picked up within the history of the different complexes within the entire complex of the self. It is also the

nature of these complexes that some of them include within their constituents, other complexes which are of a lower order. Thus the social complex or rather the social self holds within itself the appetitive or the biological self; for the biological instincts of man have to be fulfilled within the environment of the society. Thus though the appetitive self holds a complex unity of its own, its complex unity is superseded and contained within the social self from which it draws its sap and nourishment in a large measure, though it may have its own distinctive features. This procedure holds good not only in the intellectual life but everywhere. The matter that forms the protoplasmic life has its own characteristic qualities, so far as it is material; but so far as it is to be the vehicle of life, the matter is modified by life. Matter has its own distinctive material features and from that point of view it is a material unity. But the need of life is greater than the matter in its pristine character; life, therefore, modifies and controls matter. If we could figuratively speak of matter as having a will of its own or a sense of value, that sense of value has to be subordinated to the self-maintaining response of life which would appear to the material unity as of being of greater value to which it must subordinate its own idea of self-maintenance. When new emergent factors or events spring up, it holds within its sway the prior ones and dominates over them for its own self-expression, so the unities that may form the complex of the self are such that they must subordinate themselves to those unities which are higher than them and in this sense one type of value sense must subordinate itself to another.

The neural organisation, which is at first primary and very intimate with the appetitive complexes, is gradually modified with the emergence of the higher unities to which it has to respond. But it often so happens that the neural unities on the physiological side do not grow *pari passu* with equal strength with the formation and emergence of the later unities. This is the reason why often, though the demand of a higher self is often felt in the case of conflict, action does not follow in accordance with the demands of the higher, but of the lower. The earlier neural modifications which are congenital are strongest

with the appetitive. Action cannot proceed merely when the demands of any particular self in the composite complex are felt as higher, more important and valuable, but the opposition of the neural bond has to be overcome. It is for this reason that in order that one may act in accordance with the dictates of the nobler and more pervasive self, one must form new neural lines of communication and new reflexes—and this depends largely on habits. An action may be felt more virtuous, dignified and noble, yet it may not be performed, merely because the neural paths do not respond in accordance with the higher sense of value. It is no doubt true that we often feel an action to be our duty, but in order that we may act in accordance with it, we must form a regular neural habit in consonance with our sense of value. In addition to this difficulty the demands of a lower self particularly of those appetites like sex, which are very strong, have to be duly repressed in the interest of the demands of the higher self, as a result of which the repressed emotions often change their phase and objective and create new psychic difficulties.

Though we have spoken of the appetitive and the social self as developing one after the other, this should be taken in the sense that there is a greater emphasis on the social self in the later period, and the appetitive self is stronger in the earlier days. But the germs of the social self, as we have already said, are at work from almost our birth and the social urge and its physical datum must have left its corresponding stamp in the germplasm itself; so the elements of the social self are present from the very beginning and they also help the formation of the appetitive self. But the two together always form a whole which behaves as a unity. The psychical states that form a whole or a complex self always tend to manifest itself as an apperception with a conscious manifestation of it. When we are all assembled in a room there are innumerable thoughts and ideas springing among each member of the audience and myself, but each one of them has a trail of long history behind it. None of them is disconnected, but part of a bigger whole having a long history of association and implication. Though the thoughts of any two of the audience may have a similarity of

content, their position in the personal history would make all the distinction in their implication and meaning. But each thought, each idea, each emotion and will is manifested along with the notion of self. Seldom do we find any notion of self standing by itself without any reference to complex awareness through which it expresses itself. The mystery of this automatic system is not known to us. We have to study it, as we may study a machine outside ourselves. Sometimes the buttons of the machine are in such unknown and unreachable quarters that even in spite of long study it may not be always possible to regulate it in consonance with our wishes. The scheme of our voluntary life gradually enlarges without a knowledge of our dynamic bodily system. But even then voluntary action becomes easier only with the formation of reflexes, where no reflexes are suspected. As this automatic side of our bodily movements has a history far below the human level, and as these are dictated in the interest of our bodily system and particularly our appetitive selves, the instinctive reflexes with their animal passions such as hunger, thirst, sexuality, anger, jealousy and hatred are so marked and dominant that the discharge of the powers of will, or the determination of the complex will, which operates in a particular direction in obedience to a sense of value, in opposition to the primary reflexes, becomes very difficult. Again as James says, 'a supply of ideas of the various movements that are possible, left in the memory by experiences of their involuntary performance is thus the first requisite of the voluntary life. The movements that are performed leave their kinaesthetic impressions which help the discharge of the future movement.' These kinaesthetic impressions are the guiding sensation for the successful carrying out of the concatenated series of movements. The psychologists have discussed and differed as to whether there is anything else in the mind when we wish to do an act. Psychologists like Wundt, Bain and Helmholtz and others held that there was a certain feeling of enervation. But I agree with James that in perfectly simple voluntary movements there is nothing else in the mind but the kinaesthetic idea of what the act is to be. It seems to be that once the way of performance is suggested in the mind, and there

is no opposition either on the psychic or on the reflex side, the action is performed. The actions, are therefore, generally of an ideo-motor character, provided the liason between the neural reflex system and the psychic system is well established.

A consideration of what has already been said points to the view that the highest evolution of our personality depends on the degree of unity and co-ordination that we can establish between the neural and the reflex system on one side and the various complex personalities that are integrated together in the complex self under the highest unifying agency on the other. The more the co-ordination and the production of the effective unity of the different personalities integrated together, the less is the chance of internecine conflict or hostility and greater the expression of the total personality as a whole.

We must now turn from the digression to our old problem of discussion. The spiritual life is an awakening in which norms of our moral life are extended in a unity that holds within itself man and the universe and their destiny together in a greater unity which reveals a purpose of the universe and man. It is no doubt true that elements of reflection enter into it and modify religious experience into philosophical convictions. This spiritual experience is an intuitive one, wherein the intellectual elements do not attain that logical form that is characteristic of philosophy. The religious experience bathes us over, as it were, in one ablution in which the emotional and the moral elements become integrated into one whole. In the pure spiritual experience the logical aspects of the intellectual elements remain latent in the emotion.

The ground of this spiritual life is the universal purpose that runs through nature uniting the one with the other in a way that the latter ones have always to depend on the previous ones, which again become the conditions for the emergence of newer manifestations. The old is always utilised in performing new purposes and new functions and there is thus almost an omnipotence in everything. Thus if we start with the electrons and think of the waves as the ultimate matter we find how these imponderable waves can at different stages appear in diverse unrecognisable forms, and how on the basis of

them new properties and functions are manifested and the process continues until we come to man. This supreme unity that is manifested at the different stages of material, biological and mental development shows clearly that there is not only an immanent purpose running through the universe, but there is also a substantial something which manifests in entirely different kinds of functions. Our study of biology shows how the purely inorganic materials may be changed into organic, by the effect of life function which itself has a material basis at different stages of the biological development. We find that various organisms and animals come into being with various kinds of functions and modes of operation, and different mechanisms are employed for producing most wonderful and unexpected results. When on the basis of matter an entirely new factor, called life, appears, this life modifies the material datum according to its own needs and according to the environment and conditions and the stages of development. The life, which is a mysterious phenomenon and function, is a system of control and operations which are particularly nowhere but everywhere. Its roots and causes are unknown, but they manifest themselves as a real force and also as an intelligent power, a power that understands and regulates its activities accordingly and turns the body into a laboratory such that no expert chemist can manage. It manifests diverse powers, potencies and even feelings and volitions, stereotyped behaviours of the most complicated nature and the neural system which can make such manifestations possible. We see the diverse functions of life, yet we do not know what it is. It is a mysterious unity which operates in the most inscrutable manner, to effect the most unexpected and tremendous changes in the transformation of matter, the basis of life, in a way absolutely unthinkable by human intelligence. The growth, that is manifested in evolution, leads to the evolution of mind and mental processes, which are again as inscrutable as the processes of life. Yet without matter, there is no life and without life there is no mind. Again with the development of mind we find a mysterious sense of value manifested in morals, love of truth and the artistic spirit, which could not have manifested if there were no minds.

We thus find that there is an all-swallowing sense of unity, co-operation and purposiveness, starting from the most rudimentary matter or the borderland of matter as mere waves to the highest development of men of genius like Shakespeare and Goethe or Jesus and the Buddha. If we ask ourselves what is this unity, what is this purpose, we do not find it so easy to explain. Purpose means the existence of the idea of one in the other. This idea need not be conscious but still it may be effective. To take a very simple example: the son exists in the father. The father has within himself such mechanisms and functions that it is the principal fulfilment of himself that the son would come out of him. He cannot arrest it. It is not because he desires that the mechanism of the body is produced, but because the mechanism of the body produces the desire as a collateral effect that he desires. So also sex-feeling by itself may be distinguished from the feeling for maternity that the women may have. In the feeling for maternity the system expresses its inherent idea of the necessity that the body has, the purpose that it is naturally called to fulfil, the trouble and travail that women must undergo and the risk that she must take for the production of a child. The vibration and spasm, the periodic hormonic flow is an imitation of the labour pain that they must undergo when the occasion arises. Nature (whatever the term means) is ever alert harnessing the woman-folk in constant practice, month by month, reminding her each time and reminding her body also that when the time for the final fulfilment comes she may not fail in discharging the greatest duty that her biological nature has to perform. Thus Wiesner says that preparations for pregnancy take place and persist for a period of varying duration. In the human female, for instance, ovulation takes place at fairly regular intervals (of about 28 days of duration) and even if fertilization has not taken place the uterus immediately adapts itself for the reception of the ovum. During the period following ovulation it is not possible in many species to distinguish a pregnant from a pseudo-pregnant uterus. It is only in the higher development of animal life, particularly in men, that by special co-ordination the separation of sex and repro-

ductive functions have been maintained. In lower vertebrates the ova generally mature at certain seasons, and it is only then that the female responds to the male, and there the sex-act and the liberation of the ova are identical and the synchronisation of ovulation and insemitation is automatic.

It may be urged that the reproduction is merely the function of a particular organ and not of the animal as a whole; but this is not so. For example, it may appear that the ovary is the sole regulator of the sex-cycle. But it is doubtful whether there is such a thing in the higher organisms as a regulator which is not itself regulated by another organ or by some sort of somatic or environmental mechanism. The ovary certainly is not independent, it stamps its rhythm (the alteration of follicular face) upon the genital system as a whole, but it is forced into its rhythm by a superior gland, the pituitary gland. When this organ or even its interior portion alone is removed ovarian function ceases, consequently the sex-cycle remains in abeyance. But again it is impossible to substitute extracts of the organ for the organ itself. Extracts prepared from the anterior lobes of cattle, for instance, restore ovarian function in animals deprived of their old pituitary. This proves that the pituitary exerts its effect upon the nerves not through a nervous connection, but by secreting a hormone. Many experimenters have studied pituitary extracts in an attempt to learn more about this stimulating action of 'gonodotropic' hormones. They are very elusive in their nature, but it seems likely that there are at least two of them. It seems that one of these hormones stimulates the ovary to produce estrinn and at the same time incites follicular maturation. The other 'gonadotropic' hormone activates the luteal body and is thus indirectly responsible for the occurrence of the pregnancy phase. We do not at this state of our knowledge know much about the control and organisation of the pituitary secretion.

We thus see that the reproductive purpose of man or of the higher animals is determined not as the function of any particular organ, but by the very mystery which runs the biological phase of the animal or the man. To multiply examples is needless. What I wish to affirm is that throughout the whole

chain of the material and the biological functions, each manifestation carries within its nature the mechanism and the arrangement, such that, its own existence is largely determined for the sake of its other. Thus in one purposive sweep we have the whole universe held together and grasped in a principle of unity. I call this unity a spiritual unity though it is manifested in material and living forms. It reveals a spiritual formula which in all its phases, can never be understood by any intelligible formula of a physical or mathematical type. In religion, however, we have an intuitive grasp and a direct intuition of the whole process of humanity in a flash without any reference to the detailed modes of unity. But in spite of this absence of reference to the different formulae of unity in different spheres and the common bond of unity that runs through them, man in his religious experience feels himself a part of nature, and identical with humanity and the animal world. The exhilaration of his soul, which shines as a mystic light, regulates his conduct and other experiences, his relationship with his environment, and is in intimate unity with the universe as well as his ultimate dissociation from it. At this stage the sense of joy, that suffuses him, does not tax him as does a moral ideal by projecting obligatory courses and demanding submission, but it makes morality easy and spontaneous. The joy, that runs through the veins and nerves, deluges, as it were, all other considerations and plunges the individual in such a stream of mystical ecstasy, that the complexity of the universe loses all its mystery, all doubts are resolved, and the whole personality of the individual is transformed into cheerfulness and blessedness. In its true nature there is practically no form of the intuition or immersion and we may call it by any name we please, such as the realisation of the good or of God or participation in God's love. But it often so happens that there are incursions into it of our ordinary intellective side, which interprets it either anthropomorphically according to tradition, or logically into systems of philosophy, whereby the keenness of the burden of the original feeling is relieved. The Upaniṣads in referring to this state says, 'bhidyate hṛdayagranthiś chidyante sarvasaṃśayāḥ' (Muṇḍak II. 8). The knots of

the heart are torn asunder and all doubts resolved. In another passage it is said that just as in a lump of salt inside and outside there is only one taste, so at this stage there is neither outer nor inner, but only one intuition. In another passage, again, it is said that all duality is submerged here. Who can know the knower? We are in union here with the very centre of the mystery of the universe. But the philosophers come and intrude with their logical investigation and disrupt the fundamental intuition of the mystery by announcing the proposition that it signifies that the reality is one and everything else is false, magic and māyā. In Christianity also when Christ says, 'I and my Father are one', it is a perfectly religious proposition which refers to the intuitive grasp of the mystery, the feeling of unity with the mystery of the universe projected in the traditional form of God. But when the philosophers quarrel with one another as to the philosophic significance of the statement, the proposition being applied to a feeling, where the experience does not lead it, it loses its ultimate value. The fundamental truth of religion is religious experience, and this can be of various grades as we shall see later on.

It is true that the exhilaration of spiritual life in its essence has no distinct and definite articulate form, but man is so limited in the scheme of his psychic life that a new dimension of experience can never be made more articulate in its own sphere. There is a fair amount of water-tight divisions and the sphere of each division is limited to its own unique nature. If I say to a distinguished scientist, 'Sir, I saw your name today announced as the recipient of the 'Nobel Prize!', he may be delighted at that particular moment and may feel an inrush of pleasurable feeling. Later on for a moment he may be filled with a sense of vanity and still later on he may think of his future possibilities, compare his work with those of others and the element of feeling may still be glowing round the edges of the thoughts, but he will not misunderstand or make any confusion between the element of thought and the element of emotion. Thought is thought and emotion is emotion. So a spiritual intuition, if it is to be further expressed, has to be translated into the language of thought which may

obviously do violence to its own nature.

I will give an instance here from poetry. The word intuition is used in a variety of senses, but I have used here the word in a sense of revelation that may come to us by ways other than that of sense-perception and logic. Our ordinary perception may pass through the rigours of logic, and there may arise a revelation with a display of new character where the advancement is mostly found and where we seem to be in contact with the ultimate essence or the heart of the reality of the object, where the knowledge is concrete and immediate, as if we were provided with a third divine eye The yoga of Patañjali calls this direct and immediate vision of the inner essence of a thing 'prajñā'. In the passage of the logical thought into this region of immediate vision, it loses its logical character and merges into a penumbra, where we have no control over its work, and because it is natural, it has hardly ever been denied, though it has always remained impossible for us to dictate any law of its operation This intuition is always associated with the sentiment which is not the case with logical thought. Thus Spinoza says that the man of thought is chilly and cold. This intuition or knowledge in its third degree is the last aspiration of the soul and is full of supreme happiness. It reveals to us our highest ideal of truth; where our rational faculties are silent. Our aesthetic contemplation also reveals to us its intuitive character, and we recognise here a sense of value and of joy. It is in this intuition that the soul finds its response and joy, and escapes from the conflict of thought and ordinary feelings. Our theoretic activity, under its most elevated form, is of an intuitive nature and in the passage to its elevation thought loses its logical character.

Before our thought emerged to its proper level, either in the racial evolution or in our individual evolution, it was primarily of an affective character. For example, in the beasts or in the infant there is the appetitive misery of hunger and thirst and similar other miseries associated with other appetitive functions, for this reason, the life in the beast and the infant predominates in its affective charac-

ter. But later on after thought had completely freed itself from the suzerainty of mute feelings, it slowly rose to a stage, where it passes away again into higher kinds of emotion, in which the outlines of thought became blurred and the emotional element became pregnant with new significance. The sentiment, that overflows the mysterious experiences either of religion or of poetry, is probably nothing else than the luminosity which surrounds their objects.

Spinoza, in speaking of this expansion of soul in intuition says, it does not conduct us step by step to the highest limit of a peak, but it takes us there all at once in one step. Al-Halaj, the great Sufi thinker says, "For me, I have climbed the heights of the sky without having to mount step by step. I have plunged into the bottom of the ocean without using my limbs in swimming".

Spinoza further says that every emotion arises at the same moment when a light is projected and it resolves into something which has neither signification, nor power, nor reality; it becomes like a rainbow or a mirage. The specific existence that it presents, to the eyes of men is refraction through emotion and is like a broken glass or a crystal rubbed at certain points which stops the passage of light; it is the luminous world of thought. When we are taken high aloft on the summit in the air of the vast silence, the zone where the sound of life appeared so long is so much underneath our feet that we may have a sweeping bird's-eye view of them all, when we are installed there in our serene and calm peace, are we completely despoiled of all our emotions? Are they then completely dead and have we not then the slightest resonance of them? Do not our hearts vibrate there in the echo of the past? We may have still the emotions there, calm and measured, silent and yet strong, passive yet potent. This mastery over the emotions, this serenity, to which philosophers direct us, aimed at in the Samādhi of yoga, the Buddhist and the Jaina, represents to us the picture of a 'sthira-prajña' or a 'sthitadhī'. This is the highest altitude of religious ecstasy that has something in it that may be found among the poets entombed in their thoughts.

The progress of civilisation consists in emancipating thought from emotions. It does not consist in this that the thoughts should gain a mastery over the sentiments or, that thoughts should be detatched from emotions. Such a position leads us to an isolated life. But when all our emotions in a superior state make themselves felt as a sentiment of life as a totality, these emotions become aesthetic.

In the primitive state the relation between ourselves and our external environment has an affective tone. But the sentiment that reveals itself in our religious existence manifests in the conflict between ourselves and our surroundings. At every point where there is a conflict, there is something in the soul from which springs a new fountain of life and as a result new bonds are effected. This is what religion means, i.e., to tie again This unity that is effected by religion is with the entirety of the personality. It is like a shower of rain over dried seeds, is a veritable joy of the soul and is the same as that of poetry.

It is no doubt true that a certain kind of obscurity always envelops the poetic beauty. If we believe that the flight, communicated by poetry, is essentially connected with this obscurity, which is so rich with suggestive sentiments and that it is a condition of poetry, it is a misunderstanding. The movement of life that surcharges poetry is that which gives it an advantage over science and which makes it in spite of its obscurity more elevated than science. The impression produced does not lack the clarity of representation or richness and the multiplicity of representations. A poetic expression is so well founded by the testimony of our inner feeling that we are never led to think of the intellectual process of which it is the result. The artist must render his work so accomplished that we should not perceive in it his efforts. The whole thing comes out so spontaneously that all the efforts are merged in the flow. It is because we do not see the vast intellectual preparation, that presupposes the poetic work and renders it complete through poetic energy, that we are forced to admit that it is an intellectual production of a superior order. The poet himself, unconscious of the secret of his art, may so join one word with another, one image with another, in a happy juxtaposition, that we may fail to notice by a process

of analysis, how the total effect was produced. The flow of thought and the spontaneous movement that carries it, is faster than we could expect from a voluntary choice. There is something in the flow itself that guides the process over which the intellectual apparatus seems to be powerless for the time. It is only when the flow is somehow obstructed that a defect in expression can occur, and yet sometimes the service of the intellect may be useful. The force contained in the stream of emotion is such that the neural oppositions to the choice of the proper words and imageries are inexplicably removed, removed without any effort. It is for this that a composition through perfect and complete inspiration can hardly ever be improved by logical thought.

But why then is it that a particular richness in the synthesis of representation becomes a source of joy and poetic emotion? Because, the poet goes there to our aid for realising for us that which we hold dearest to our heart, and because, perhaps, our minds were unconsciously striving to reach it, though they had not the power to do so. We had a vague presentiment of this idea, perhaps only in our clearest moments, and that by sheerest good luck we tumbled very near it, but could not catch it. The appeal of the religious man and his experience is also due to a similar cause. The unity of emotion, thought and will, through which the religious experience dawns, submerges within it the feeling of unity of the whole of our inner nature, the apperception of our undying personality, the appreciation of the highest goal as the good or God and the universe at large. In reality, we all seek to realise the nature of our selves and all that we get in passing moments of our psychosis are but partial slices of the psychic instinct as they flash up on the conscious level. The Upaniṣads say in the most emphatic manner and with a depth of conviction that true experience can show that our love of all things images the love of our own selves. We love riches, our sons and our wives, our husbands because we love ourselves. We have an intellectual amour with our own selves. The aesthetic emotion thus reveals a deeper view of our inner existence. It is for this reason that our aesthetic activity has no other motive beyond itself. Our own poet

Tagore has in many of his writings distinguished the aesthetic sentiment from all other sentiments, by the fact that it alone is devoid of any other motive beyond itself.

The main point which I have been trying to explain in drawing this comparison between religious experience and the experience that guides the poet is, that both of them reveal a dimension of experience which is entirely different from that of science. Science deals with concepts and their analysis and logic is its handmaid. Here we split up the whole into its parts, in order to arrive at more and more definite and precise conception of the ultimate structure of things. The investigation of science takes us away from the beautiful world of colours and sounds, shapes and forms, symmetric lines and contour, to the ultimate waves which are only mathematically definable. The attempt of mathematics has been to express in the symbol of numbers certain observations, which do not present themselves to our senses. From the world of every day reality we are led to a magical world of ultimates where the entire material world of extreme diversity is despoiled of all its manifold characters and reduced to a pantheism of mere waves. In religion and poetry we follow the opposite direction, the direction of synthesis and the direction of totality, and here also we are led to a magic world, where in the diversity of the manifold world of shapes and forms, sounds and colours, pleasure and pain, the beloved and the hateful, all merge together into a solid experience which stands as the ultimate at the other extreme. The main difference between the poetic inspiration and the religious is, that the former is limited in its sphere where the personality expresses itself in its entirety through emotions of the moment into which it plunges, and through which it expresses its inner logic by rhythm, words and images, while the latter is all absorbing and makes an entire change of our whole personality.

The truth of religion is realised in a way different from the truth as defined in epistemology. Truth here is neither correspondence with fact or consistency with other perceptions. Truth is a revelation of our inner dynamism seeking to apprehend its unity. We find that the scientist is anxious to discover the

truth, but he is not always satisfied by his discovery. He knows in the heart of his hearts that most of which he is palming over us as truth may be entirely false, he knows that he is himself outside the machinery, he is only attempting to form a picture of what may be inside. He has the keenest suspicion that some day or other such a truth may be found which will explain all other truths, which being known everything else will be known. He is anxious to find a final formula for the distribution of all matter and motions but even that is not all. He dreams that this formula when properly discovered would also explain the mystery of life, its evolution and probably the growth of all our psychosis. He is busy with the diversity. He is anxious to comprehend the truths that mystify our understanding of the tiny little atoms or the electrons and he hopes that through them he will one day arrive at his destination of solving the mystery of the whole. Though he had his tremendous disappointments and failures, he can be true to his vocation as a scientist that this enquiry is the summum bonum of his existence and can have a supreme trust, that one day or other the mystery will reveal itself to its votaries. The scientist is an analyst, though he believes in the final synthesis and trusts that there may be such a truth which is the ground of all other truths. We find here that until he achieves his final truth, all the other truths, that he discovers for us, are only provisional. Truth is self-evolving. No one can say 'I have found the truth'. The Upaniṣad says—*yasyāmatam matam tasya matam yasya na veda saḥ*[1] He who thinks that he knows does not know, he only knows who thinks he does not know. In our religious experience we begin at the other end of science; we begin in a bliss or a sense of harmony. The movement of this experience may end itself into a God on whom we are dependent and to whom we have resigned our personalities as a part of Him, who realises Himself within our personality and also makes it realise itself in Him. It is for this reason that the language of the lover and the beloved has often been used in the expression of religious feelings. Love is a sentiment which is the expression of an ultimate purpose in which the beloved exists in and for the lover and the lover for the beloved. There can be no love

which involves any separation even in idea. In the pathological conditions induced in ordinary love and so called divine love experienced by the mystics, we find that when the beloved is away from the lover, he pervades his or her mind more intensely than when they were together. So when the mystic, a Caitanya or a St. Francis feels that he is away from God, his wailings and pangs of separation are many times more than when he is, in a state of intoxication or ecstasy, enjoying divinity within him.

To turn again to the similarity between the poetic and the religious experience, it is important to notice that acute thinkers have regarded them both as involving the principle of transcendence. The true poet is not, as is generally believed, a useless dreamer, a lover of sensations or a juggler of superficial rhythms and rhymes. He is one of those who are predestined to carry from the bottom of our selves a truth, which it is his mission to reveal, representing the world that is and that ought to be. The scientist works in his laboratory, examining vast fields of operation that appear in nature for giving an abstract interpretation of them. The poet on the other hand feels deeply about a common incident in the street, or history, or an old memory, or a star in the night, and advances towards the most profound speculation envisaging its reality in an atmosphere of suggestion and thought, which reveals and transfigures it in an entirely new manner, such that the object of his inspiration in its particular common reality dwindles into insignificance. It is only a pivot, a pin-head, as it were, on the support of which there appeared a paradise of colours and symphonies entirely incommensurate with it. The magic effect of poetry far exceeds in music and meaning the words, images and the life. It is like a chemical effect, the nature of which is unpredictable from the elements. It is for this reason, that this transcendent character gives poetry its magic and charm. The poet can feel himself at home with such persons who belong to his spiritual family. They must mutually understand each other and must share in a common transcendence of experience, unattainable by the addition of words.

In the vast field of nature, where it appears in its extensive

synthetic character the scientist works in order to find clues for discovering the internal design of nature, and this design in its synthetic character may be an object of poetry or of religion. But poetry is limited for its expressions largely to the object of sense. But religion is, in one important sense, different from it that it always transcends the real. It always binds a man to something that is beyond limit and beyond destruction. The human sentiments are incomplete and unsatisfied, but they can raise edifices that can go beyond the possibility of all logical comprehension. Poet's creations have to appear in verbal forms, pictures and music through sound, sense and rhyme which penetrate far beyond the object which forms its basis, but religion is an art in which the great genius of religion transforms the whole inner being into an architecture for accommodating the enquiring humanity of the future under its shade. The business of the philosophers is to explain the world through a logical scaffolding. But the man of religion finds in himself an intuitive vision in which he can merge, in the highest reality conceivable. There is always in man a surplus part over and above that which is required for his biological needs and the needs of his intellectual demands. It is this overflow that surcharges the psychic personality with an urge for upward evolution characterised by a sense of value for the pursuit of truth, for modifying the conduct, for weaving the beautiful and for realising the totality. As it is beyond the supervision of the logical function it cannot be explained by the intellect, for it itself explains the intellectual activity.

Our logical functions are supposed to be those which lead us to the adjudgment of truth. But if the spiritual faculties dominate over the logical and are not restrained by them, the logical faculties can give but little intimation as to the criterion of truth. Truth is sometimes defined as correspondence with facts and at others consistency of the report of the various organs of knowledge including the logical faculties. But we see that both the scientist and the metaphysician are aiming to find the truth, and have been arriving at new and sometimes entirely different results in the history of their growth, and in spite of all their toils the goal seems to recede into an ever wider

distance. The definition of truth as correspondence has to yield its place to the consistency theory wherever there has been any conflict or opposition between two ways of grasping the truth. The exponents of the consistency theory have also been forced to admit that there are different degrees of consistency in our conception of the world in accordance with which they admit different degrees of reality and truth. The philosophic theories of Śankara and Buddha have also admitted a relative and a final reality. It is easy to see that none of these philosophers have been able to formulate any satisfactory definition of truth. Kant, who thought that our experience was largely a fabrication of our mind, regarded all experience as false. According to him a truth was possible to be asserted only of something which could be known apart from all relations which becomes an impossibility. If we can have no knowledge without relation, and if all relational attributes are false, we can have no knowledge of reality at all. In science also we are driven from one system of facts to another to contradictory and unthinkable positions, and far from absorbing all the facts of nature under one principle, no certainty has been arrived at in the investigation of any particular department of nature. Still there is the faith and optimism in us, the trust that one day at least we shall arrive at the truth. It is this trust which is urging us on to endless enquiries in our forward march. Eucken puts the dilemma thus:—Either the striving after truth points to some kind of existence beyond the human circle, and then our inability to attain a direct intercourse with the things will prove itself ever new and ever clearer; or we create the whole reality out of our thoughts and that such a titanic plunge soon breaks into pieces and the over-strain of the human powers will take vengeance on the increasing emptiness of our existence. Science has taken the compromise in a pleasant manner. It is satisfied in whatever it gets; it indulges in new theories and if theories come into conflict with facts it declares the facts that are observed and remains inconclusive as regards the theories. But whenever we want to pass from mere awareness to truth and certitude we find that our difficulties are insurmountable.

In our actions again we are no better off. The ideal of

morality always points to something the horizon of which is shortened by our will and the good appears as the fruition of our motive. The moral good and the good as the pleasurable or the good as the satisfaction of one's desire hardly ever coincide.

But howsoever difficult it may be to arrive at the truth, either as knowledge or as activity or as feeling, there is always a search in our nature. And life consists in its independence and transcendence, in its power to draw reality into itself and to strive after it, to expand from within and to become a universe of its own. The failures of life are indeed there. The insufficiency and even the contradiction of life are daily experienced. The ordinary determination of practice and instruction, of efforts and failures of technical rules of morality and their violation, the opposition between society and individual, the government and the individual, between societies and societies, between nation and nation, between the powerful and the feeble, always invade our inner life, we often feel that the ordinary distribution of energy that guides our life is exhausted in making us hold our own amidst the various conflicts. We feel that there must be a surplus energy somewhere in us, which should be able to carry us over these contradictions in a sweep. The whole of our inner nature cries in mortal agony, performs a penance as it were, a 'tapas' that it may die and from out of its ashes there may arise a fresh power and a fresh energy which may produce a true regeneration, and reveal sources of energy and power for attaining the good, rising over the contradiction and achievement of truth which it could never conceive. It is the inner demand, the inner humility that is often interpreted as confession and prayerfulness to God. Whether there is a metaphysical or a physical God located somewhere in space who acts as a demiurge, the majestic architect or the Visvakarmā, who created the universe and held men in bondage to Him is more than we can affirm. We can only say that there is always within us a surplus energy, a surplus psychical power which acts as our inner providence whenever there is an urge for it, a sincere craving to rouse it from its slumber. Like the fable in which the ocean is said

to have been churned by the Gods and the demons, there is an internal churning always going on within us between the good and the evil, the pleasurable and the good, truth and falsehood, and whenever the conflict is harassing and there is a real demand for fresh power and energy for rejuvenating the tattered life, there is a free flow of that vital stream, which raises a man all on a sudden from the oscillation of his contradictions. To my mind this idea, this spiritual content has been expressed in Hinduism, Buddhism and Jainism by the word 'tapas' and by crucifixion in Christianity. Whether this concept is polarised in the form of a God, to whom prayers are offered and confessions are made, or whether the form is that of meditation or self-criticism and a prayer to one's own higher nature is immaterial, and it is here that we experience the spontaneity of our spiritual life. The God that is spiritual in content and form cannot be regarded as reigning in a distant place somewhere above the stars on a golden throne surrounded by His satellites and angels; for, such a concept is physical, it is an image in the three-dimensional space. There is nothing spiritual anywhere excepting in the spiritual experience of man. It has been explained above that the term spiritual with us does not mean simply a mental content, a mere idea having well-rounded edges of exact connotation and denotation; it is an enlightenment suffused with emotion and will, an urge possessed with a supreme sense of value and offering unique experiences of blessedness and relaxation. If God be spiritual this must be a copy of Him. It is in this form that He reigns over the heart of us all. His place of location is not in the space outside but in the space inside. He is the Lord of our hearts; His majesty is not so much in the majesty of the brute world as in the majesty of love, the majesty of good, the majesty of freshness and regeneration, the holy and the blessed. It is for this reason that the Hindu artists who used to make the images of their Gods, did not borrow their conception of space from the octagonal space of the Greeks or the elliptical space of the Chinese, but they tried to draw the suggestion of space, from the space within us, the spiritual and the mental.

The opposition of the subject and object as one's own indi-

vidual perspective of life and one's external environment can be taken up into the life process itself, and overcome. It is here that the illumination and the purpose of the entire inner being, in harmony with the formula of progress that we find whispered along the evolutionary stages, finds its ultimate culmination in the possibility of continuous regeneration and re-creation of our inner life. So long as life shows in us as mere adaptation with our environment and so long as our intellect is applied merely as a weapon for self-preservation, may it be the appetitive or the social self, we have only some sort of a continuation of the chain that we have up to the evolution of man. It is only with the dawn of the spiritual experiences or spiritual values in religion, poetry and art that we have the true significance of the emergence of man as a spiritual being. It is the spiritual life that indicates a reality, all complete and transcendent in itself, that constitutes the final pinnacle of glory of the evolutionary process. It is here and through this that we emancipate ourselves from the smaller zones of appetitive life. Being in the individual it surpasses it; what the individual attains in him through great effort carries with it the assertion and the assurance of its validity and power to bring something of value to all and forces all to recognise its claims. It is like the bugle horn that rouses all from their slumber and awakens them to the need of a conquest without which humanity would never rise to a level higher than that of the beasts. It is the apperception of a truth which the religious persons possess in common with the irreligious, the difference being that the latter is ignorant of the position. The foundation stone of man is laid in the surplus life which holds fast the totality of life and can construct a self-activity over against the bare mechanical and biological activity. It is the life process which unfolds itself in an ever-revealing progress spontaneously guiding and governing the natural impulses of man. It is the true self-preservation to which the activity of all other parts of our nature points and finds its ultimate harmony. A spark of the spiritual life guides the scientist, enlightens his path and strengthens him in his perseverence by faith, trust and optimism. Eucken says—"The main movement of life encom-

passing all the separate points and shaping itself characteristically and specially overcoming the opposition between theoretical and practical reason, becomes a striving which longs to pass from this region of the untruth which at the start surrounds us, to the region of truth, the longing after truth and real existence become now the motive energy of the spiritual life; as in the province of nature so it now becomes here the longing after self-preservation which rules all movement, but the longing is after a self-preservation quite other than that found in nature". Its purposiveness does not consist only in holding within itself any new form of emergence, but in what may arise by unifying all that has preceded it.

From what we have just said it would appear that the dawn of spiritual life in man shows itself in a sense of the higher as apart from the sense of the more advantageous and pleasurable. It has already been shown in our criticism of the hedonists and the utilitarians that even they risked a contradiction in assuming a superiority of some kinds of pleasure over others, in introducing a distinction of quality as apart from quantity. Such an introduction naturally shows the primary character of the sense of value which is a new emergence in man. Throughout our psychic history we find that our appetitive tendency, however valuable it may appear for our self-preservation, and however strongly it may be grounded throughout the biological history, easily subordinates itself to the superior claims of our higher social self. This shows that such is the mechanism of our psychic nature, such is its plasticity that even the most well founded demands, spontaneously confess their inferiority to another group of demands which spring from the social self. The history of humanity, so far as it is superior to the beasts, is manifested by the continual assertion of the claims of the higher social self over the original neural strength of the primary appetitive demands and values. This social value consists in the preference that is given to others over one's own self. It is in a sense entirely anti-biological and repudiates the instruction that nature has been giving throughout her animal history. To love my enemy as myself, to follow the advice that one should turn his left cheek to any one

who may smite on one's right cheek is in flagrant contradiction with the formula of evolution involved in the struggle for existence and the survival of the fittest. Yet it is by carrying out the demands of this type, however imperfectly it may have been done, that the progress of humanity has been possible and the system of social life, laws and justice, charity and fellow-feeling, love and forgiveness have succeeded in welding together humanity as it is to-day. It is true no doubt that the demands of the lower self often get the better of those of the higher social self in practice, and this fact can find no better illustration than in the case of modern Europe where Christian nations are attacking one another like wolves and tigers and devastating civilisation, like Taimur-lang or a Chengis Khan of the past. But still the great geniuses of religion had sprung in different ages and their teachings had penetrated into the hearts of the people and had succeeded in civilising mankind and also protecting it from tumbling down into barbarism. Thus Garnett says, "We have found that beyond any activity subservient to the ultimate will, the finite individual as such has no other sense of value, which makes its appearance, and is universally acclaimed as the highest." It is found in the making of the individual life as a will when it is self-subservient to the good of the whole. It is evident that this value has to some extent been known throughout the spiritual history of the human race, so far as the records of that history can inform us, for it alone can account for the preaching of social justice from the pyramid age to the present day, and for the admiration of genuine altruism by civilised man and primitive savage. But the full and proper nature of the goal was slow to define itself. Mankind helped by the spiritual geniuses, who appear from time to time, felt its way to a knowledge of the ideal.

But in the moral ideal there is always a conflict and impulsion from the higher sense of value towards it about the full and unswerving loyalty, that it requires. But the issue is not always clear, and obedience and loyalty are not simple and easy. We distinguish the higher spiritual level from the moral level by the fact that in the spiritual level, in its ultimate and superior stage, there is no such hiatus or conflict. In the spiritual

life, struggle of moral life vanishes away and gives place to a scheme of life which is spontaneous and from which the throbbings and pulsations of doubt and prejudices, the waverings and the oscillations of the moral life have vanished. We are here in the deep calm sea, unruffled by storms and breeze and shining like moon-beams, which is complete in itself. Like rivers flowing into the ocean, all the transitory and subservient ideals have changed their significance and found their full meaning by flowing into it and by being transmuted into its serenity.

This spiritual experience and the apperception of its value, as the highest, that can ever be revealed to an individual, naturally points to the existence of a reality, which, being self-fulfilled in its own nature, expresses its inherent sense of purposiveness and value as the meaning of what precedes and the basis of what is to come. Finally in the gradual development of man, from the primitive to the civilised state, from the stage of mere animal existence, to the stage of its higher spiritual enlightenment, it comes back to itself and expresses itself in so far as it can be expressed in a human frame. Throughout the whole process of evolution we find new stages appearing all of a sudden, and in this appearance we notice the expression of a new function of life upon the basis of the previous life-phenomenon and the environment taken as a whole. There is a surging onward movement of life, apparently satisfied with its immediate purpose, but unsatisfied with reference to the continual flow and discharge, an emergence into new forms, which seems to point to a purpose, far beyond it. When the waters of a spring rush forth from among the rocks of a hill, flowing down its gravel and sandy bed, whistling, surging, foaming and falling down the precipices in torrents and gorges, until it descends on the valleys, where shining in the sun it meanders through the crop-fields and shady woods, by the cottage side and the market place, supplying water for drinking and bathing to the thirsty animals, enriching and fertilising the ground, everywhere throughout its course a purpose is served. But what is the supreme purpose of the flow, why does the Ganges flow from the Gangotry, down Hardwar and Banaras, until it receives within itself many other channels of

water and flows on and on, through the vast jungles of the delta until it is lost in the sea? It is the ocean that it was aiming at and once there, its purpose as a river is fulfilled. So the metaphysical significance of the spiritual experience points to a spiritual reality which hides within itself the secret of its purpose, its summum bonum as its ultimate revelation in man.

Our assertions about truth depend upon our inner experience. If I see a tree in front of me I have to admit its existence until it is contradicted. So the perceptions of our senses grow and are systematised in their mutual consonance and in subordination to the higher control of the logical rules. The scientist has no other criterion of truth with him, he says, I admit all that I see in my experience. Yet he knows that by the very organisation of the experiment and observation, the thing that was being observed might have changed, but as a man he is fundamentally limited to his psychological apparatus. Still it is on the basis of this that he has to make his affirmations about truth and reality. His own psychological experiences are the only means of arriving at any conclusion or affirmation of any proposition as true. How can we say that the culmination of all our experience should be something which should be devoid of any significance and meaning or truth.

The same argument has been offered in the Upaniṣads. Thus the Vṛhadārañyaka Upaniṣad says, that the Ultimate Reality of all the diversity in the world of castes and creeds, and creatures and objects is to be found in the experience of the higher selves. It says that you cannot hold the nature of a music from its outward form, but when you carry the musical instrument with you, you know that somehow or other you are in possession of the music. The sound of a conch when blown cannot be stopped externally by itself, but the sound is stopped when the conch ceases to sound or the blower of the shell ceases to blow. This passage has often been interpreted to mean that it is the self that is the only reality in all things and that the manifestation of their forms are false and unreal. This is, however, to my mind far beside the real meaning. The lute, the drum or the conch and the blower or the drummer are the agents who have produced the sound. So it is the real-

ity, indicated by our spiritual experience, that is responsible for all that we see around us; just as without the drum and the drummer, there would be no sound, so without the ultimate spiritual reality, manifested in the self as the apex of the evolutionary process, nothing would have any meaning and nothing would have any being. Again the Upaniṣad in a way repeats the same imagery and says, as all waters find their centre in the sea, all touches in the skin, all taste in the tongue, all smells in the nose, all colours in the eye, all sound in the ear, all precepts in the mind, all knowledge in the heart, all actions in the hands, all movements in the feet, so the ultimate reality of all is to be found in the self. The clear meaning of the text has often been misinterpreted by commentators. It simply means that nothing in the world attains any significance except without our psychological apparatus, the function of the senses and the mind. Then again it says, 'as a lump of salt thrown into water becomes dissolved into water and could not be taken out again, but whenever we taste the water, it is salt—thus verily Oh! Maitreyi, this Great Being, endless—unlimited, consisting of nothing but knowledge, rises from out of these elements and vanishes again in them. When he has departed there is no knowledge, I say Oh! Maitreyi'.

The simple idea of the passage, which we have been urging so long, seems to be that the self or the spirit has evolved from out of the elemental materials; it does not outstay them, yet it is thick with knowledge, thick with experience. Maitreyi bewildered at the speech asked Yājñavalkya 'How it is Sir! you bewilder me here by saying that the self after being dissociated from material elements does not have any further consciousness'. In reply Yājñavalkya says, 'I do not say anything bewildering. What I have said is sufficient for proper understanding.' He then further says, 'So long as there is a duality, there is the seer and the seen, the smeller and smelt, the hearer and the heard, the saluter and the saluted, the perceiver and the perceived, the knower and the known; but when the self is all this how should one smell another, see another, hear another, salute another, perceive or know another. How should one know Him, by whom he knows all these. How should one

know the knower within himself'. The meaning here also is very clear, though learned commentators interested to prove theories of their own, have drifted on other lines. The Upaniṣad here clearly says that the self can express itself as the knower and the known, the subject and the object, under the conditions and limitations of a body and a mind, but the reality that is indicated by the spiritual experience has no such distinction in it, because in that spiritual experience the whole universe has become one in it, because the whole universe has evolved out of itself. It is impossible to have any mental content or idea or any knowledge or awareness in the ordinary sense of this reality from which the situation of knowledge as the knower and the known have come into being. It is by virtue of the self-progressive evolution of the ultimate Reality, indicated and manifested in the spiritual experience, that the world has appeared as what it is. The Reality of the world is not something different, from the highest reality that is manifested in the spiritual experience; the only difference is that it overstrips everything else, and that it transcends all things and yet holds them all within it. Our passage to the Reality is only by an emergent intuition which cannot be conditioned or produced by our will or any manipulation of psychic conditions, any more than we can produce any element of nature or category of life. It emerges of itself. Its emergence is grounded in its own nature, which is inexplicable and unknowable. It is for this reason that in the religious experience of those, who, by virtue of old traditions, refer to this Reality as God, speaks of him anthropomorphically as yielding this spiritual experience to man by his divine grace. The Upaniṣads also say that the self reveals itself to him alone, whom it chooses. The doctrine of grace thus is only a polarised and projected way of interpreting the unconditional appearance of intuitive experience. The Upaniṣads are not tired in declaring again and again that to him who has this spiritual experience everything is sweet as honey, for he has passed by all conflicts.

That the spiritual experience is the culmination of the highest unity is again and again repeated in the Upaniṣads. The Upaniṣads further say that all our faculties of sight, hear-

ing, speech, etc., are in reality one with the self or our central personality. They are but manifested functions of him and therefore, cannot be separated from him. All who worship anything but this illumination of consciousness enter into blind darkness and those who delight in mere scientific knowledge enter into still greater darkness. The supreme wisdom consists in regarding the experience of the spiritual self as one with himself and with the whole reality. If a man understands the self and says, 'I am He', what could he wish or desire that he should pine after the body. 'Whoever has found and understood the self that has entered into this hiding place (body), he indeed is the creator for he is the maker of everything. His is the world and He is the world itself. If a man clearly beholds this self as God and as the Lord of all that is and will be, then he is no more afraid. He, behind whom the year revolves with the days, Him the gods worship as the light of lights, as the immortal time. This eternal being that can never be proved is to be perceived in one way only. It is spotless, the unborn self, great and eternal. This unborn self consists of knowledge and is surrounded by the prāṇas, within the heart of our hearts. He reposes there as the ruler of all, the Lord of all and the king of all'.

That this spiritual experience is beyond good and evil is well said in the Upaniṣads. He does not become greater by good works nor smaller by evil works. He is the lord of all, the king of all things. Try to know Him by the study of the Vedas, by sacrificing, by gifts, by penance and by fasting. He who knows Him becomes a silent sage. He who knows it becomes subdued, satisfied, patient and collected. He sees the self in his self and sees all in his self. Evil does not overcome him, but he overcomes all evils. Evil does not burn him, for he burns all the evil. Free from evil, free from spot, free from doubt, he becomes a true man.

CHAPTER VIII

SOME PROBLEMS CONNECTED WITH RELIGION

I

The ordinary laws of evolution do not seem to apply to all religions as they do in other spheres. The religions, that have evolved later, are not necessarily better and more adapted to spiritual life and experience and to humanity as such. It is worth noting here, also, that religion does not consist in dogmas, metaphysical opinions, in ceremonial rites, rituals, in mass worship, shared together with fear and hope or congregations of persons at critical situations, praying to God for worldly good. Religion consists in the spiritual life and the spiritual experience. We have ample references in the seventh chapter to spiritual life and experience and have tried there to indicate it by suitable descriptions; but religious experience is a matter of acquaintance and that which is a matter of acquaintance can hardly be brought home to us by description. Russell held that acquaintance derived from science, does not theoretically at least imply even the smallest 'knowledge about', i.e., it does not imply knowledge of any proposition concerning the object with which we are acquainted. 'Knowledge about' is the knowledge of a proposition which is not involved necessarily in acquaintance with the constituents of the propositions. To know that two shades of colour are different, is knowledge about them, hence acquaintance with the two shades does not in any way necessitate the knowledge that they are different. Thus assuming that religious experience is a real and concrete experience, it is possible that the person who is directly acquainted with that experience may not without further abstraction, make any more affirmation about the nature of that experience. An acquaintance is a direct plunge into the nature of its object, be it through the senses or through the mind or by some other spiritual function which behaves uniquely like an ordinary sense.

Religious dogmas, ceremonials and rites are but limited

symbols for making the first approach to receiving the spiritual illumination, and are mechanisms of thought and imagery of the mind. When, through it, the religious person makes his advance, and true enlightenment dawns on him, he is no longer tied down to the limitations and imperfections of the symbol. For this reason, even through an imperfect symbol a truly religious genius may have the experience of the highest type in which he may have direct acquaintance with the true spirituality of his self; he may be so submerged in it that it may be impossible for him to take any notice of the imperfection and the inconsistency of the symbol with the reality experienced by him. For this reason the traditional symbol of a religion does not justify us to say anything about the religious experience, through which a religious genius comes in touch with the object of his heart. Thus, for example, we may refer to the case of Śrī Rāmkrishna of recent times. It is said of him that he was a worshipper of the dreadful goddess Kālī, naked and hideous looking, with garlands of human heads on her shoulders, blood dripping out of her tongue, holding a sword in one hand and indicating protection by the other and standing on the body of her husband, Lord Śiva. The worship of such an image cannot naturally be regarded as suggesting any happy symbol, but we find that the symbol did not offer the slightest difficulty to the expansion of the spiritual life of the saint. From the conversations and remarks that he made, as reported to us, we find that his mind had reached a state of experience far surpassing the limitations of the symbol and indulging in the experience of truth which are of the most universal nature. From the limited symbol he passed to the unlimited zone of experience, which he held in common with the experiences of other saints of other periods, who were separated from him by long spans of space and time. Here is another peculiarity which testifies to the truth of spiritual experience. A genuine spiritual experience is always the same whenever and at whatever time it may occur. It is true, no doubt, that personal factors of temperament and inclination, tradition and teaching of individuals may sometimes lend a colouring to their experience. But this colouring is easily discernible and it is easy to recognise the common element so far as

it is possible for us to judge from their description of the experience and from the general outlook that they have of the world and humanity as a whole. There is a common saying in Hinduism that just as all rivers fall into the ocean, so all ways of religion lead to God. If one compares the different religions, ignoring the differences that are due to their interpretation in language under different conditions of social evolution and the mental back-ground, from which they were reflected, one may come to the conclusion that the highest religious experience is essentially the same as a sense of supreme value and indicating a summum bonum. We find that the semitic mind conceives the eternity of the spiritual truth as eternal residence in heaven under the most pleasurable conditions. We know that the fruition of all secular good fails to attain bonum consumatum, and therefore we may infer that the ultimate good of man is non-secular and eternal. We also know that the revelation of the spiritual reality in us is an emergence from our nature, and is not merely a momentary flash, a moment of ecstasy, but dominates the whole of our personality. We can thus see that the Mahomedan or the Christian conception that the ultimate consummation of our nature is only possible through the grace of God, is but an anthropomorphic transformation of a great spiritual truth which is universal. The fact that our spiritual and moral experience always points to a goal beyond, which eludes our grasp, but always urges us forward, reveals to us the fact that we can have a taste of the highest reality, and that it is always beyond us. It points to an eternity and a transcendence which is on the one hand revealed in the process of world evolution, and on the other hand in our moral and religious experience. If we take a flower and scientifically botanise over it we may certainly arrive at a codified and systematic group of information about it, but if we look below and beyond, it becomes impossible for us to make any affirmation as to the 'why' of its evolution and as to the 'whereto' that it is tending. We do not know the meaning of the history of evolution, of divergent emergent expressions, for each step in the evolutionary ascent has a purpose in it that makes it a link in the chain of the unfolding process. The same urge is felt throughout the

personal history of the individual and finds its consummation in the religious experience. Our own character answers to that of the good to which we aspire. The attainment of a fully unified personality depends on finding our principal good in God, the concrete unity of all good. It points to the existence of God as the absolute and final State of good, and to an eternal destiny for the moral person, whose aim is the fruition of the good. The Upaniṣads and the Christianity believe in a final doctrine of salvation which is a transcendence from nature to supernature, from attachment to detachment.

But a question may naturally arise that the so-called spiritual experience, whatever may be its nature, is a psychological state of mind like any other psychological state. What is then the reason and justification for attributing to it a special position of superiority and finality. The point to which I wish to draw the attention of my readers is that viewed merely as a state along with other psychical states, it may have no importance, but the most important feature of this experience is, that it is associated with a sense of value, a sense of realisation, which makes us abnegate the importance of the demands of the other parts of our psychic nature. The flash of spiritual experience by itself may wholly stagnate and destroy the force and violence of other desires. The whole mind appears to be unhinged from its original states. All those desires and passions which held their sway over us seem for a time to have completely relaxed their grasp on us. But not only this, when this spiritual influence comes to stay and dominate over us, the other parts of our nature are crippled and crumble before it, and their value seems to us to be trifling and insignificant. It is only when the spiritual enlightenment can spontaneously exert this influence over the other parts of our nature that we can say that the spiritual life has really dawned on us. The fundamental difference between the awakening of the spiritual sense and that of the moral sense is that in the latter, man is not in his equilibrium and balance; he is being pulled from high as well as from low, he succeeds and he fails, but at every moment he is in a state of tremendous conflict between the two parts of his nature. It may, however, be urged that the suspension and relaxation of

the grasp over us of the other demands of our nature, on the rise of a concrete spiritual experience may be regarded merely as a neurotic condition. To this our reply is that no neurotic state can accomplish a harmony and equilibrium, which can be effected by the spiritual influence. The spiritual experience, while it dominates over us, removes the stress and strain of the conflict of our moral nature. Just as a seed grows within the mother without her knowing anything about the nature of the growth, so does in the poet's mind, his joyous apperception break itself up slowly and spontaneously and assimilates materials from his experience in a harmonious way, and the creation is completed. In the same manner the spiritual principle within us dominates the mind of the religious person, and completely transforms his nature, in such a spontaneous way that there is no trace of conflict, when the transformation is going on. It is because the supreme sense of value and joy spontaneously suffuses our nature and transforms it after its own pattern, that its superiority cannot easily be gainsaid. No other psychical state can so consistently, and without any effort, control our inner nature.

It must be noted that if we understand by religion the ceremonials, the rites and rituals, the narrow ways of expressing of what is truly religious, the medley of the religious and the non-religious, with great admixture of local customs and practices and inessential beliefs, conditioned by local exigencies, it may be the source of the greatest evil to humanity. That what is truly religious can appear only to the few. Under mis-apprehension the supreme strength of religion may be transferred by a psychical mechanism to inessential and harmful beliefs and may create fanaticism which, passing in the name of religion, may altogether baffle its purpose. In our discussions whenever we speak of religion with respect, we always refer to the real spiritual experience which never violates the fundamental essentials of moral life, but on the other hand makes a life of morals easy, spontaneous and elegant.

A study of the concrete details of the different religions must lead anyone to the conclusion that the great religions have emerged out of a religious consciousness which is universal.

Religious consciousness, though based upon the social sense, is as primary, yet is something different from it. Religion differs from science in that it is not interested in the universals or laws with which science deals. Its point of emphasis is the individual in his solitariness. Whenever religion appears as a function of the congregation we have a large amount of extraneous element surreptitiously introduced into religion. Whenever we read the Old and the New Testaments, the Qu'ran or the Upaniṣads, we find that almost everyone of them emphasises the necessity of solitariness. In the early days in the religion of the Jews we find that the individual is anxious with his personal griefs and wants, which he refers to God for removal. In the religion of the ordinary people, also, God is looked upon as the most beneficent and all powerful being, the sovereign of the earth, who when appealed to, removes the sorrows of the people. In the popular religion we find that sacrifices are offered and offerings are made to the Divinity for the attainment of success and good luck or for the removal of an impending danger. Such personification of a deity and his gross worship for the fulfilment of personal need would not in our view correspond to the higher concept of religion. But what we miss here is that urge of the higher ideal is not of a spiritual nature, and has not risen here above the lower levels of animal life. Also the urge of morality in such societies does not depend upon its inner norm, but upon the prospects of fear and hope; yet there is the optimism that there is somewhere a Master of the great show of this universe and that our pleasures and pains, our enjoyments and sufferings, are not arbitrary happenings, but regulated either by an inexorable law (as the law of karma among the Hindus) or by the will and dispensation of God. Ethical and moral laws were thus almost inalienably connected with the principle of religion which seeks and finds the unity of all things in God. God is no doubt omnipotent in His will, but He is also omniscient. He knows our sins and virtues and He awards His punishment and rewards in accordance with our deeds. In many religions of the past the notion of good and evil is believed as having originated from our obedience and disobedience to God's commands. In the Jewish religion we find

God entering into a covenant with Moses that He and His people should not worship stones, trees and images, but should worship only God and obey His commands. Most of these commands seem to have evolved from a due regard to man's place among the members of a society and denounce any aggressive attitude that he may have towards them. They do not recognise the still higher demand of our nature that we should love our fellow beings. We find the same distinction between earlier vedic teachings, which were satisfied with inculcating the principles of non-injury, and the later teachings of the Gītā and of Buddhism which impress upon us the necessity of loving all people. Thus the Gītā says that a truly wise man looks upon the lowest of men and even a dog as being equal to one's own self. The Viṣnupurāna also urges that because a great reality pervades everywhere, the true perception of unity and equality among all is the real worship of God. In the Hīnayāna Buddhism, and more particularly in the Mahāyāna, supreme altruism is the fundamental principle of religion. But in spite of the great height to which individual religious geniuses arose, we find this spirit lacking among the present day civilised societies, particularly in the conflicts that arise between one nation and another. It is also a curious fact that the humanism, observed in the laws of Manu, among the ancient Hindus, is much superior to the behaviour of modern nations in war which indiscriminately bomb churches and hospitals, libraries and temples, and bring devastation to innocent civil population, and do not hesitate for a moment to enslave the weaker nations completely. This only shows that the evolution of religion is not a function of time. It is most often a quality of the individual. There were in the past individuals, and there may even now be many, in whose minds true religious values emerge and control all their conduct. Though certain people are more barbarious, blood-thirsty and avenging than those marked and characterised by kindness and humanism, yet religion has always as a rule mitigated the barbaric spirit. It cannot, however, be gainsaid that by a wrong emphasis on the inessential part of religion, it has often become a tool of fanaticism and of selfishness and has worked mischiefs of an extremely shocking

nature. It is true that the centre of interest among the civilised people has passed on from religion to economic advantages, sense of prestige and power. But still in countries where medieval conditions prevail, adherence to a particular faith is made the butt of political squabble and controversy, giving rise to much trouble and misery. For such countries as also for those which in spite of their high civilisation and culture sink down into barbarism in their mutual dealings, with nations, it is necessary that the true essentials, as distinguished from its false and lower aspects, should be understood and appreciated both by a clear thought and by listening to great instructions of the religious geniuses of all nations.

To return to our old point. It should be understood that religious enlightenment is primarily the solitary communication with, and self-dedication to, the Divine, though the idea of Divinity and individual's relation with it may be misconceived and wrongly represented in undeveloped minds, and the true significance of the real spirituality may often be lost sight of.

II

The problem of evil, moral as well as physical, has always played an important part in the attitude of different religions. The Parsees believe that there were two principles of good and evil, and that ultimately in the war between the two, Ahuramazda, the principle of good, would be victorious and Ahriman, the principle of evil, be vanquished. One of the cardinal and noble truths of Buddhism was that every thing was sorrow; but the sorrow cannot be annihilated by death, it can only be annihilated by supreme moral endeavours. All evil was of moral origin and the culmination of morality is in supreme wisdom. We suffer because we are ignorant: we suffer, because of our greed and attachment, and we have greed and attachment, because we are foolish. In accordance with the original prescription of Buddha as found in the Pali canons, man is asked to proceed on the course of moral struggles for the removal of sorrow; and humanitarian actions and feelings, universal sympathy, charity and benevolence as well as universal friendship are supremely encouraged. But the object of all these is 'the

stimulation of moral progress. But in the Mahāyāna faith of Buddhism universal charity, friendship and kindness, sacrifice of oneself for others attain a position unwarranted by the metaphysical teachings of the Buddha. As the story goes, Buddha was led to his enquiry because of his personal sympathy and suffering at seeing others suffer. Enquiring about the origin of evil he invented his metaphysical dogma that everything was misery. The cause of misery was attachment and ignorance, and the aim of moral problem was the destruction of them both and with it the destruction of human personality. But the Mahāyānists seem to have taken their cue from the life and character of Buddha which set forth in a most illuminating manner the humane pangs of the noble souls for the suffering of his fellow-beings or rather of all living beings.

Christ, on the other hand, had but little metaphysical doctrine. The general scheme of His religion was that of the Jews which had grown under the influence of the Parsees, the Assyrians and the Babylonians. In the Jewish religion God appears as an external Being, a majestic power, with whom man has to enter into a covenant for his own safety and advantage. When Job complains against the prevailing injustice, sin and misery, he is silenced by God by a pompous show of His own majesty and the inscrutable nature of His purposes. But the whole attitude of the Jewish religion is entirely changed and transformed by the expansive religious experiences of Jesus. Jesus is not anxious to formulate any metaphysical dogma, but in the light of his own experiences he discovers the position of man in the love of humanity and God. The inessential rites and rituals of the Jews are treated by Jesus with contempt and he utters, with supreme and unchallengeable convictions, the fundamental fact of religion as being complete sincerity and resignation to God, to see God in humanity and humanity in God. Love is thus the most ennobling flame which burns our sins and brings us within the scope of the omnipotence of God's mercy. It is the very absence of any clear-cut metaphysical dogma that has given such an elasticity to Christianity that the old terms and categories can be the vehicle of newer meanings. It will be seen that the definition of spiritual life and spirituality

as well as of religion, may not seem to have the same form that we have given before. But it will be seen that though our definition of spirituality has been made out of deference to all the scientific researches in the various fields of study, and though it ignores the traditional doctrine of God as a being existing outside of ourselves, yet the spiritual experience making all the smaller ideals and desires subservient to God, would not be different from that which we have referred to. We shall later on show by a reference to the Hindu ideals of religion how those ideals come within the connotation of our definition. Our definition of religion as a system of beliefs regarding our highest good, as inspired with emition and as co-ordinating our will, is elastic as far as the connotation of the highest good is concerned. In many religions the highest good is conceived as eternal bliss in heaven, while in other religions it appears to be eternal bliss in itself. Our own view of religion is practically silent regarding the question of the existence of the self as an entity. Our eternity, therefore, is not to be interpreted as ceaseless succession of time, but as pure duration that is felt in our plunge in the spiritual experience.

The rationalism of Christian religion is not in the formulation of arguments and reasons or in the instruction of metaphysical dogmas, but in the straight and simple apperception of the great truths of religion, namely, love of God and love of mankind, rising to a pitch in which it can co-ordinate all our smaller ideals and desires and transmute our baser passions into the nobility of life. The life of Christ is not an exhibition of power or learning but of sweetness. Only those who have the religious insight can discern it. It reveals to us the supreme ideal of mankind, the crucifixion of our sins and the regeneration of our spiritual life.

We have said before that our religious experience is characterised by the highest sense of integrated value. This integration consists of recognition of the value of the self, the value of other selves, individually and the value of the objective world, the society as well as the nature itself. Its unifying force is projected before us as the appearance of God, His incarnation in our life.

With the gradual growth of personality we learn to give value to our own selves. So far as one is conscious of one's appetitive personality one thinks that, one has a supreme right for appetitive enjoyment. This explains the beastly man, who is anxious only to preserve himself. But as an individual grows and feels that he has become a part of society, he asserts the demands of his own social self. With the growth of his social consciousness through conflict and sympathy, through mutual understanding and give and take, he understands the value of the selves of others and of the community of the selves as a whole. But it takes a long discipline and effort before he can admit the value of the selves of others, as much as he does of his own self. It is still later that the value of the debt that he owes to the society is clear to him. Even when he becomes conscious of the demands of the larger society or of humanity at large, he can seldom acquiesce to its demands, whenever he may be in conflict with it. Religious and spiritual experience helps man to integrate these different values in mutual harmony, in consonance with the highest value that appears to him in his relation to God. The self-valuation with which he started gradually broadens in such a manner that conflict in different senses of value is destroyed, and in its turn leaves the broadening sense of self-value intensified and extended in a way as to enable it to cover the whole of humanity. With the growth of the sense of value, emotions and purposes relevant to this notion also develop along with it.

Man asks himself how he should reconstruct his own self in order that he may make his life godly; and it is largely because his mind is surcharged with the emotion of godliness that he can subjugate himself and serve society in any objective manner. Even in religions where no God is admitted, it is the influence of the experience of a spiritual ideal, permeating in and through the entire psychical range that it is possible for anyone to make his highest efforts in a spontaneous manner for the attainment of the good. This good is but peace and harmony with the objective world and with one's own self, in consonance with the attainment of supreme beatitude in which the world and the self will be transcended. The fundamental function of reli-

gion is that it supplies the formative and the dynamic principle, through which one can regulate and co-ordinate one's life after the high pattern of the good, which being the highest ideal is complete in itself, is in and for itself and is therefore absolute.

In every advanced religion we hear of revelation and we are told that the truths that we may attain for ourselves, by the application of our senses and our logical faculties, are much inferior to those attained by revelation. Thus, in the Hindu theory of revelation, the Vedic scriptures are regarded as revealed works. There is a divergence of view among interpreters of Vedic literature as to whether every item of this revealed lore sets a norm of action and enjoins us to work in a particular manner or to meditate according to a definite programme. It presupposes the theory that mental activity as expressed in meditation is not only equivalent to physical activity, but sometimes even superior to it. The interpreters hold that the revealed literature cannot contain anything that is intelligible to any one in the ordinary way, it is not also the purpose of revelation to describe what is already existent, for what is already existent should naturally be knowable to our senses and the mind, and it would be useless for revelation to discover for ourselves anything which we could have known by our senses. Whatever else may exist in the revealed literature is inessential and should be regarded as intended only for emphasising the injunctions or prohibitions. The opponents of the school of Mīmāṃsā are the followers of Śaṅkara. They hold that though many of the teachings of the Vedas are of the nature of prescription and prohibition, it is also the function of revelation to show us the nature of the spiritual experience, indicative not only of the highest value, but also of the highest reality. When we turn to the religion of the Jews we find that the revelation made by God to Moses is of a prescriptive and prohibitive manner. God made certain commands asking men to follow certain courses of conduct and to restrain themselves from others. This revelation again does not appear in a massive form to many people, but only to chosen few. In Judaism the messages of God were delivered to Moses and the prophets, but they were no revelations of God's own

nature or of any kind of spiritual experience. The same may be said of the Islam. Here also we find the prophet charged with the messages of God, not only with prescription or prohibition of conduct but also with the description of the nature and glory of God. But in the case of the delivery of the message to Moses the situation under which God appears to him seems to suggest the nature of the spiritual experience that he had, according to his own interpretation. We find that both in Judaism and Islam a terrible being is set forth as the holder of a covenant with man, who is prepared to punish transgression in the most fearful manner. But in the Christian revelation we do not find any evidence of any conversation between God and Jesus. Jesus' own life is a revelation of God's nature. The instructions, that Jesus gives, flow spontaneously from the nature of his inner perception. Jesus does not think the washing of his hands before meals or taking ham or beef to be at all important, for it is not the things that go within that pollute a man, but rather that which comes from within that can pollute him. So also it is not external washing, but the internal one, that can purify him. The conviction of Jesus, that he was one with his Father and that the whole humanity were his brothers, naturally implied the divinity of all man. The revelation that came to Christ was the impregnation of his mind by the Holy Ghost, the spirit of God. The Christians hold that whatever Jesus said was gospel truth, because it was through Him that the revelation of God came down to men. Thus here we have another type of revelation, where the highest truths flowed from the inner life of Jesus, beaming forth in expressions of sincere wisdom impregnated with the touch of God. When we study the lives of other saints, Hindu, Islamic or Christian, we find the divine revelation appearing in diverse forms. Thus we find that revelation is the appearance of the supreme ideal dominating our entire psychic personality and demanding the submission of our entire existence to it and illuminating itself in rays of wisdom and deep emotion. It cannot, however, be gainsaid that in certain cases traditional elements and elements of customary practice which had attained the force of compulsion often enter into it and distort and deflect the real purport of the spiritual

voice. The Vedic injunction of sacrifices and rituals, as elaborated by the Smṛtis, in enjoining taboos of various kinds, is an example of it. It is for this reason that the Upaniṣads sometimes decry this Vedic religion, as smelling of animality. In cases of other religions, ordinary human love often becomes transmuted and appears to take shape of divine love and love for God understood as a person, with whom the devotee, as it were, was wedded. The religious experience of the Christian mystics often illustrate this experience. St. Teresa, thus describing one of her experiences in "The Interior Castle", which has been quoted by James, says "In the orison of Union, the soul is fully awake as regards God, but wholly asleep as regards things of the world and in respect of herself. During the short time the union lasts, she is as it were deprived of every feeling, and even if she would she could not think of any single thing. . . God establishes himself in the interior of this soul in such a way, that when she returns to herself, it is wholly impossible for her to doubt that she has been in God and God in her— . . . During the union she has neither sight nor understanding, but that she sees it clearly later . . . . . . after she has returned to herself, not by any vision, but by a certitude which abides with her and which God alone can give her".*

Though we find that the experiences of St. Teresa, St. Catherine and St. Julian are all on the same line, we should not think that there is any peculiarity in the experience of women saints, for if we turn to the experience of other men saints like the Arvars of the 7th or 8th century A.D. we find a similar intoxicating love for God.

Thus Nam Arvar or Śaṭhakopa says as follows:—

> Long may she love, this girl with luring locks,
> Who loves the feet that heavenly ones adore,
> The feet of Kaṇṇan dark as rainy clouds:
> Her red eyes all abrim with tears of grief,
> Like darting kayal fish in a deep pool.
> Hot in this village now doth blow the breeze
> Whose nature coolness is. Hath he, this once,

* The Varieties of Religious Experience, p 400.

The rain-cloud hued, his sceptre turned aside
To steal the love-glow from my lady, lorn
For Tulasi with wide eye raining tears?

Thou, fair as Kaṇṇan's heaven, when he's away
What ages long it is! He here, a span!
Whether friends stay for many days, or go,
We grieve. Yet be this spreading darkness blest
In spite of many a cunning trick it has.
What will befall my girl with bracelets fair,
With tearful eyes like gleaming kayal big,
Who wanders with a secret pain at heart
For blooms of Tulasi fresh from the Bird's Lord
Who with that hill protected flocks in storm?[1]

It is clear from our way of approach that we are not dealing here with the aspects of religion as an institutional organisation. We are dealing almost wholly with personal religion where the individual stands with the sense of his incompleteness and helplessness and his earnest craving for God, not for any personal benefits or advantages, but from the urge of his spiritual needs. The essence of this religion is that rituals and ceremonies lose all importance. Religion here is a heart to heart relation that binds man with his highest ideal. This of course, limits our consideration to that aspect of it which is truly spiritual. The institutional part of it, which consists of rituals, sacrifices and ceremonies, is the part, wherein the religions differ. They differ also in the nature of their prescriptions and taboos. This has been the cause of much dissension and evil which have been attributed to religion. Our study of science, anthropology, biology, etc. ought naturally to shake our faith in any emphasis on these unspiritual parts, and it is largely with reference to them that the modern scientific mind rebels. They have indeed social utilities, which have strengthened the bonds of unity between the co-religionists, as in mediaeval times they had much political significance also. But inasmuch as these fall short of spiritual

[1] Hymns of the Alvars by J. S. M. Hooper, pp. 61–68.

value, they are practically left out of consideration in our present attempt.

The aspect of religion, in which we are interested, refers to our relations with our fellow beings and the relations of our smaller personality to the higher one. The study of science has left us inconclusive regarding the question of our personal immortality, that is, whether there is any entity in us, which survives death as a physical fact. We are also inconclusive regarding the physical existence of a personal being, whom we may call God. But our religious experience assures us of a spiritual reality, which we feel within us, and may be interpreted as a personal being or merely as an ideal reality continually urging us forward and immersion in which is the source of supreme blessedness. In our previous discussions, we have surveyed the enquiry of the human mind in different departments; we have not affirmed anything merely by the testimony of our spiritual experience, which is controverted or contradicted by our findings in other branches of learning. While acquiescing to the result of scientific enquiry we cannot at the same time disregard one important branch of our experience, the moral and the religious. We have shown that though the objectivity of the moral experience cannot be proved in the same manner, in which the experimental facts are proved, we cannot ignore the value of the moral experience as reflected even in our scientific pursuits. So long as the facts of our study are of a concrete nature and perceivable by our senses, it is possible to bring them under the conditions of our sense perception and attribute to them the guarantee of uncontradicted experiences of the senses. This has been the method of physics and chemistry which deal with physical objects perceivable by the senses. Physics and chemistry have, therefore, indulged in the conception of universal laws and universal concepts based upon the observation of individual facts and behaviour. But even in physics, when a study goes to the domain of the infra and the minimal, we find that we meet with facts, which seem to contradict each other and go beyond the power of normal comprehension. We can still study them on the basis of mere mathematical relations and come to results

which are only mathematically valid and of which we cannot form any picture. Thus a study of physics has taken us to conceive of a space which has more than three dimensions. The electronic arrangements, if they are in the multi-dimensional space, cannot very well be brought within the scope of our psychic comprehension, which is limited to three dimensions. We find that our physics of the continuous comes into opposition with the physics of the discontinuous. Our concept of corpuscles are contradicted by the concept of waves and even the limits of our experimentation is challenged by the fact that our very effort to observe, changes the nature of the observable; that more certain we are of the velocity, the less certain we are of the location. Competent mathematicians have no doubt tried to work backwards and have imagined mathematical formula and patterns of physical existence which would save us from the contradiction. But howsoever that mathematical formula may explain the present situation, it cannot be held that they are ultimately true, for the possibility has not been ruled out that there are other ways by which the contradiction can be solved equally well or in a better manner. Our experiments in the domain of the infra and the minimal have become unavailing. The efforts of the scientists, though they seem to proceed on the assumption that they would affirm only such truths as may be attested by sense perception, postulate the law of logic that truth cannot be contradictory. Even the most thorough going scientists unconsciously and unquestioningly accept the postulate of the meta-physician that truth must be consistent. These primal beliefs are the dogmas of science, as in a way they affirm indirectly, the identity of being and reason. They are as much afraid of irrationality as the metaphysician. Thus we see that the hope of the scientist is baffled when he approaches the region of the infra and the minimal. But if his baffling moods and frustrated experiments destroy his hopes, what is it that sustains him? In his unswerving perseverance for future investigations, what is it that instils in him faith and hope? What is it that urges him onward for the discovery of truth regardless of failures, poverty, bad health and uncharitable circumstances? If one were following the de-

mands of a biological need or the acquirement of social goods or anxious to earn money or fame, the position would have been intelligible. But the true scientist or mathematician has no other aim before him but the discovery of truth. The idea of fame and honour seldom becomes an urge for a true scientist. It is only when he has enjoyed much fame and honour that perhaps in his irresponsible moments he might be dreaming of fame or reputation or money by way of emotional luxury. But for a true scientist that seldom becomes an incentive to work. He is pushed forward, driven, as it were, by an inner urge of a super-personal order, for it dominates him and completely subordinates his biological or social self. I should not for a moment hesitate to say that though the vision of God does not appear to such a person as the mighty supernatural Being living in heaven, yet a supreme urge for the attainment of truth overwhelms him completely. It is here, that the difference between science and religion vanishes. Thus Einstein in an article in 'Nature' (November 9, 1940) says: "At first then instead of asking what religion is, I should prefer to ask what characterises the aspirations of a person who gives me the impression of being religious: a person who is religiously enlightened appears to me to be one who has to the best of his ability, liberated himself from the fetters of his selfish desires, and is preoccupied with thoughts, feelings and aspirations to which he clings because of their superpersonal value. It seems to me that what is important is a force of the superpersonal contact and the depth of the conviction concerning its overpowering meaningfulness, regardless of whether any attempt is made to unite this content in a divine being for, otherwise, it would not be possible to count Buddha and Spinoza as religious personalities. Accordingly a religious person is devout in the sense that he has no doubt of the significance and loftiness of those superpersonal objects and goals which neither require nor are capable of rational foundation. In this sense religion is the age old endeavour of mankind to become clearly and completely conscious of those values and goals and constantly to strengthen and extend their effects. If one conceives of religion and science according to these definitions then a conflict between them ap-

pears impossible; for science can only ascertain what is, but not what should be, and outside its domain value judgments of all kinds remain unnecessary. Religion, on the other hand, deals only with the evaluation of human thought and action, it cannot justifiably speak of fact and relationship between facts. According to his interpretation the well-known conflicts between religion and science in the past must all be ascribed, to a misapprehension of the situation which has been described".

Einstein further admits that there exists between science and religion strong reciprocal relationship and dependencies. Religion has to learn from science not only the mystery of the physical universe, but also the mystery of that urge that leads a scientist with faith, hope and trust, to drive forward in the pursuit of truth entirely neglecting himself.

III

One of the principal contributions of science is the impression and the conviction it has been able to produce in us, that though we may be yet far off in discovering the ultimate formula from which the law of all causal complexes may be discovered, yet there is nothing in the world which does not form a part of a well-ordered and harmonious pattern wherein everything is connected with every other thing. This reveals a complete whole all through an order and harmony, a symphony of causal complexes such that there is nothing in the world which can transgress their laws. This orderliness, this supreme purposiveness make a sudden divine interference impossible. But Einstein treads on dangerous grounds when he says that our will has no spontaneous causality, a causality which cannot wholly be explained by purely neural causes and conditions. There is somewhere a reserve within us which seems to baffle all determination. A similar reserve of spontaneity exists also in nature which is responsible for the transitional evolution of the living from the non-living and also probably of the diverse accidental variations without which the evolutionary process would have been barren and unfruitful. So long as we look at evolution as distribution of matter and motion there is nothing that can choice, or whether the thoughts at a particular time have such

explain how there is almost a purposive process that is responsible for all our actions on which judgments may be made by other persons. The reserve of energy that lies somewhere in secret seems to manifest itself both in the function of our will and in the animate or the inanimate existence.

In our thoughts, two aspects are distinctly observable: one, the passive, as when we open our eyes and see the lawn before us; and the other, the active, as when between two alternatives we make a decision or between two motives make a moral choice. The sudden rise of thinking from a history of neural and physiological processes is just such a phenomenon which, perhaps, no purely and objectively scientific explanation can hardly ever grasp. How from the neural and physiological processes, which are purely of a biological type, we have the thought processes, is one of those unknown leaps which nature often takes throughout the course of animate history. It is by such leaps alone that nature has made her advance, and which has always baffled our attempts to reduce nature to one kind of causal complexes and their laws. There has hardly ever been a psychologist who has denied that we think, except the behaviourists, who even in their attempt to deny thought, have tacitly assumed it. If therefore, we have to believe that thoughts exist, we must also believe that they exist in the manner in which they appear to us, and if this is to be admitted, it has also to be admitted that they sometimes come spontaneously as if without effort and at other times with effort. The next question is, is the effort induced by the object of thought, or is it some independent variable function of the thought itself? It often so appears that the same object which may be chosen at one time spontaneously, may be chosen at another time with effort or may not be chosen at all. If this be so, our choice or effort becomes a function of our thoughts. In that case our choice or our will becomes unaccountable. But if the amount of effort depends upon the objects, then our choice or will becomes dependent on them. The whole point of discussion in the controversy between free will and necessity from the psychological point of view is, whether our psychical history together with the neural history behind it definitely determines a particular course of

super-values in them that they may of themselves override the force of the psychical and neural history. To my mind it appears that two different answers are possible. There are occasions on which we feel that we are forced to a decision simply by our history. At an inadvertent moment and without giving proper consideration to the case we may have promised something to a man. Later on, even when we find the fulfilment of the promise undesirable and objectionable, we may still find the force of the promise binding on us and fulfil it even against our wishes. At other times, however, we may feel that we are making a deliberate choice freely and spontaneously, without feeling any compulsion. But it may still be said that even when we feel that we are making a choice deliberately and spontaneously we may have been determined there also by the sum total of the force of our psychic and neural nature. It is impossible to determine and measure the total value of psychic and neural forces to such an extent as to be able to assess, if a particular action was determined by the previous history together with the nature of our neural and psychic constitution. It would thus be impossible to say, whether such an action is free or determined. In such a dubious case, it is profitable and practical if we decide the question on the evidence of our psychic experience of the moment, i.e., when we feel absolutely sure that we have chosen here spontaneously by a sense of our preference, that we have been here free in our choice. We cannot deny that we have a sense of value, a sense of preference, which is primary and original, and it is not continuous with our biological and animal history below the human level. An aesthetic apperception of value which may lead an artist or a poet to be guided by his aesthetic sense, makes its first history in man, as we do not think that there is any proof of any aesthetic sense of value in the sub-human level. The determination in such cases has to be admitted primarily to have begun in the neural processes of the aesthete. We may, therefore, hope that we may not be wrong in supposing that a sense of aesthetic value may dominate the neural processes in such a manner as to make an aesthetic expression by an artist possible. Here we have a case where our sense of value deter-

mines our action against the previous neural history where the sense of value did not exist. The free will of a man does not for us mean that there is any homogeneous entity which we may call soul. But soul with us is nothing more than the expression of the psychic self and such a psychic self is a complex of various elements, much of which has a history concurrent with the sub-human stage, e.g., the appetitive self. It is there only that we may call ourselves free when a sense of value or worth, which is not present in the sub-human stage, first makes its appearance in men, sometimes even antagonistically to our sub-human history and determines our choice psychically as well as neurally.

The proposition of determinism has the advantage of apparently bringing human activities in a line with mechanical activities where everything is determined. But we hold that no scientist can ever show that all the activity of nature is determined in a mechanical way and that such a determination is continuous. The complete failure of all mechanistic conceptions to explain the fundamental features of life as an autonomous complex is a sufficient proof against the postulate of any scientist that nature is completely deterministic. While in a certain sphere nature works deterministically, in another sphere it takes that datum and starts a new kind of determinism, where the former determinism is used as a material and not as a determiner. The laws of matter and force are absorbed in life and utilised by it for its purposes. But the special features of life are so different from the mechanical distribution of matter and energy that no mechanistic explanation can be given of the self-creating process of life. This self-creating process becomes further clear with the rise of mind, which is an autonomous complex by itself, absorbing and utilizing the gifts of life for its own purpose. The sense of super-value may in its turn be regarded as an emergence from mind which subordinates the psychic elements for its own ends. Side by side with the scientific postulate that the world must be one unbroken fact and that the prediction of all things without exception must be ideally, if not actually, possible, there is the moral postulate about the universe that what ought to be can be, and that good and bad acts are not predetermined. Even a scientist cannot

ignore this moral postulate, for, he also utilises it unconsciously in his scientific ventures. When failures accumulate and disappointments darken the atmosphere, the lonely scientist is filled with the conviction that because truth ought to be known, it can be known; and it is because of the fact that his whole psychic personality is focussed and filled with this conviction that he can move forward fearlessly against tremendous obstacles and difficulties. The so-called conflict between the physicists' postulate and the moral postulates appears only when they are not taken in their proper perspective. If the moralist applies his postulate to any epoch of world history and says, that what ought to be, can also be, there, he would be wrong; for, the postulate, "What ought to be, can be" is a formula of advance and always refers to an ever-receding future eluding our grasp. It seems to us, that both the postulates are true in their respective spheres. Nature is deterministic up to a particular point when it acts spontaneously and creates another deterministic system. These deterministic wholes are related to one another in the supreme law of purposiveness, the ultimate end of which is the fulfilment of the moral law, 'what ought to be, can be'. The history of the universe so far as we know it, seems to justify this assumption.

The fatalistic argument for determinism is radically false. When a man follows his weaker self and gets more and more enmeshed in the wave of circumstances, habits and dispositions, he sinks in disappointment and says, "All is fate". The argument is false, for there is always in our mental current an element of force, which, if it can be roused and made stronger, can make a tremendous difference between one moment and another. A person who feels the importance of free will knows very well what is meant by independent power. A philosophical or psychological deterministic theory would rule out the possibility of such a power. The question as to whether a man under the fatality of his habits should be able to exert his will, to resist the force of old habits, depends upon, whether he has been able to rouse in him such causal complexes of super-value as may bring out the power that lies within him, by awakening other values associated with rational thought. Every

man has in him a fund of reserve, which lies potential and dormant within him, when he is floating, as it were, in the neural current of habit and reflex. He never exerts himself to resist his own habit and often thinks that he has no power to do so. Once an opposite sense of value arises, a new power manifests itself through its initiations, and, provided that it is sufficiently constant, it gradually acquires a new force and may ultimately destroy the old force of habit. It is here also that sometimes all of a sudden, provided the individual keeps himself sufficiently passive and unresisting a new fund of energy arises from within and may lead the individual to overcome the effect of the habit that was tending to dominate over his will. It is here that the question of the religious experience of prayer and God's grace comes in. A religious person when he feels himself weak in striving against his evil tendencies may resign himself to God and may feel, welling up from within him a superior strength by which he can combat the evil. I do not say that God as a personal being, having a physical existence somewhere lends the individual his powers through His mercy by which the individual can raise himself. But the fact is that the individual mind is so associated with the traditional idea of God and His grace in the scriptures that it interprets this sudden welling up of his powers as manifestation of God's grace. The better or more suitable idea here is the idea of the "antar-yāmin"—"yaśca antar-yamayati"—he who controls our inner psychosis is the overruling self within us.

We know that a part of our psychic history is the history of reflexes and the process of associations that automatically determines through a mnemonic system a large part of our psychic life. The truth of the behaviouristic or of the associationistic psychology may appear to be correct in some cases, when a man is viewed as an animal determined merely by psychic and neural reflexes. But this is not the entire history of the human mind. There is stored within us additional psychic power and energy as may be seen in the case of continued attention and meditation, decision and resolution, moral conflict or moral conversion. It is here that we can feel that our psychic personality is not a mere automaton. This inner force and power may be

regarded as a sort of a superior personality and inner controller, and Indian theists have often tried to conceive of it as God indwelling within us, who is behind all the senses and faculty of the mind and who over-rules them all. The idea of Christian conception of the Holy Ghost is also somewhat akin to it.

To return to the point as regards the ordinary theistic interpretation of a personal God, the criticism is probably valid that it is an anthropomorphic projection from the structure of our own thought. The structure of our language shows that whenever there is any kind of activity we project there a personality, and make it the agent of the action. We transform even pure being into an action in our verbal usage. Thus in the proposition 'it exists' or in the proposition 'the rose is red', or 'the rose is beautiful', there is really no action associated with the agent. But for linguistic usage there seems to be no distinction between the two propositions, 'the rose looks beautiful' and "Rama killed Rāvaṇa". In reality it is only a primitive sort of thinking which alludes to God as a supernatural Being, who is omnipotent, omniscient and all merciful. The God with whom we are concerned is the God within us, the power that speaks from within our internal nature. Dean Inge, a devout Christian, admitted his inability to find any basis within the physical world for the traditional eschatology of the Christian religion. The question cannot be evaded; and it seems that we must take the words of St. John, "It doth not yet appear, what we shall be", more seriously than most of us do. If we face this quite frankly, our conclusion will be not that death closes all, but rather the unseen spiritual world, 'the kingdom of values', is as I have maintained, no mere ideal or aspiration, but a fact and existing reality, which can only be pictured symbolically and poetically under the forms of time and place. I do not know whether this abandonment of a local, geographical and temporal next world will cause distress and indignation among many of my readers; science, as far as I can see, leaves us no other alternative. In the famous dialogue of Yama and Naciketas also, Yama declares that in the true sense there is no death. Death, rebirth and transmigration are only in the vision of the ignorant.

We thus see that we have no hesitation to be one with a scientist in denying physical existence to God, for the very simple reason that what appears as physical would itself be an emanation or manifestation of Him. But with His objective nature as to what He may be, we have but little concern. We can only speak of Him and we are primarily interested as to how He appears to us in our experience.

If we look into the history of the different religions, we find that the most primitive way, in which the idea of God manifested itself to human mind, was power. God was an omnipotent Being who created the world, who terrified all by his majesty, who satisfied the moral questions of incompatibility of suffering by the inscrutability of His majestic powers. He enters into a covenant with Moses and people are afraid of His terrific vengeance. It is this aspect of God that also appears in the primitive religions and also in the religions of nature worship. As a remnant of it we find also God's powers described in the Upaniṣads as the dreadful fear, the upraised thunder, by the fear of which the wind blows, the fire burns and death runs. The next higher manifestation of God in human consciousness is knowledge as supposed in the Upaniṣads, Taoism, the religious philosophy of Plato, Neo-platonism, and in all the philosophies of gods of the great philosophers and metaphysicians. But the highest manifestation of God is love, as it appears in Christianity and Vaiṣṇavism. In the dominion of love and in the higher religious consciousness of man, knowledge and power take a subsidiary place.

In the evolutionary process, also, we find in the world of nature the evidence of a purposive power and energy that gradually grows into more and more complexity of purposiveness, until we come to man, where mind evolves and the supreme power of evolution manifests itself as thought. In the higher evolution of man we find that thought evolves into love of truth, love of man and love of God.

We now turn to the belief that is current among many psychologists that religious experience, particularly of a fervent mystic and of mystical type is generally a sign of a weak intellect and neurotic constitution. The implication is that, conse-

quently, the religious experiences of the great religious geniuses are to be ranked as mental aberrations of weak intellects with morbid and neurotic constitution. About fifteen years ago the present writer had met Prof. Starbuck, the celebrated psychologist, at a symposium on mysticism, held in Harvard. Prof. Starbuck's contention was that he had experimented upon many mystical and religious students of his class and by putting them to intelligence tests, found that they were all weaklings. There is a fundamental misconception of the hysterical persons and religious mystics in such judgments. It is true no doubt that a mystic, a poet, a musician, must have a very sensitive constitution and must have a nervous system which is psychopathically very tender and excitable. It is for this reason that we often find men of genius to be cranky or abnormal in their behaviour. Tyranny and oppression from society are the penalties which they have often to pay, for such aberrations. But a true religious and mystical man is he, who has a overstrung psychopathic constitution associated with a high degree of intellect and moral powers. It is only such people that can translate spontaneously their feelings and experiences into emotive and active demonstration. They remain gloomy and melancholy, they are secretive and meditative, they run into ecstasies and trances, act as they think and jump into obstacles without any fear, are capable of infinite labour and suffering and are never afraid of any consequences in the discharge of actions according to their convictions. Their intellect is of a high order, their thoughts deep and penetrative, and they are often much in advance of the people about them who fail to understand them. When ordinary people find it difficult to ignore a religious man, they may even hate him and it may be possible that they may ultimately obey him, and regard him as super-human. If a man of high intellect has a well-balanced constitution, which is not psychopathically over-sensitive, he would lack in general the emotive apparatus of such a sensitive order as to allow him to experience emotions of an over-whelming nature or to run into actions, which might lead him to endless difficulties and obstacles. Such a person is too cautious and has too much foresight to plunge into anything. When those, who are intel-

lectually weak, possess a psychopathically sensitive constitution, they become dreamy and epileptic. They are neither men of action nor men of character. They are mere bundles of emotion, which rock violently their nervous system and may ultimately break it. So, the true judgment must be based upon the final achievements of intellect and action, upon character and strength of will and not upon mere demonstrations of emotions, and their bodily reflexes. A prudent man with a thoroughly balanced constitution may understand an action to be good, but he would think thrice and balance the advantages and utilities of the action as against the possible suffering that might be associated with the due performance of the action. He, therefore, cannot translate his thoughts and resolutions, so spontaneously and carelessly as a mystic would do. For the mystic is possessed, as it were, by the urge of his conviction and experience and would not even hesitate to risk his life, to follow the mandates of his inner self. It is by these qualities of thought and action that great religious geniuses stamp their character or ideal, not only on his contemporaries but on mankind in general, for endless centuries to come. Without suitable nervous system that responds deeply with every thought, will or emotion, no one can produce a profound influence and impression upon his people. The trance and ecstacy of a mystical or religious person is the sign that his neural equipments respond spontaneously and deeply to every vibration of his thought, emotion or will. It is, therefore, an extremely superficial outlook to make a confusion between the false and the true mystic. Whatever the mystic feels and thinks, leaves a profound influence on his personality and his action. A sober and normal man is, by virtue of his balanced constitution, unable to harbour or offer hospitality to any overwhelming emotion immediately demanding a translation of itself through speech and activity and the ennobling of character. The Chaitanya and St. Francis of Assisi illustrate the point. James held that if there were such a thing as inspiration from a higher realm, it might as well be that the neurotic temperament would furnish the chief condition of the requisite receptivity. Thus, Mr. Nisbit, in 'The Insani-

ty of Genius' says, "Genius is a symptom of hereditary degeneration of the epileptoid variety and is allied to moral insanity. Whenever a man's life is at once sufficiently illustrious and recorded with sufficient fullness to be subject of profitable study, he inevitably falls into a category by himself. And it is worthy of remark that as a rule the greater the genius, the greater the unsoundness".[1]

IV

The question of evil and suffering is a fundamental one in religion. According to our definition, religion involves a belief in the possible eradication of all evil; and in the various religions of the world various theories were adopted as to how evil could be completely eradicated. The primitive people had their sufferings and sickness, and they attributed it to transgression of some sort and regarded them as being originated by the mischief making spirits and ghosts, or attributed it to the departed ancestors, or to some failure in totemistic duties. They also believed that the non-observance of certain taboos might of themselves create suffering and sickness. The suffering and sickness of a primitive people was largely of a bodily character and these were thought to be due to unseen powers. They thought therefore, that these could be removed by propitiating them. In the religion of the Parsees the principles of good and evil are constantly at war and the bad is ultimately destroyed. Ahriman is the principle of evil. The way of destroying the evil is through moral greatness and attainment of moral virtues. Among the Jews the evil proceeded as a vengeance of God. The original evil was due to the disobedience of man and his consequent fall from blessedness. We hear also of the covenants between God and Moses and we understand therefrom that disloyalty, disobedience to God was the source of all evil. From Job's complaints we know that even apart from that, sufferings happened which were of an inscrutable nature. But God being almighty, if it pleases Him, He can offer remissions from our sins and sufferings. In the Assyro-Babylonian religion, sufferings, particularly of diseases, were regarded as origi-

[1] Quoted by W. James in his "Varities of Religious Experience", p. 18.

nating from sins, and could be removed by confessions and expiations. In Christianity man can be absolved from all his sins by the grace of God. God's grace is unlimited and, provided a man confesses his sin, believes in the articles of Christian faith, God in his superior mercy will absolve him from all his sins and assure him of eternal heaven. In Hinduism, we have various strata of beliefs, lower and higher. But the final teaching of all is that the ultimate emancipation from all sorrow can be attained either by true knowledge or by love of God. In spite of differences among the views of different systems of Hindu philosophy, there is practically a universal agreement in the belief that evil is foreign to the soul. It is through ignorance and illusion that the soul learns to regard the experiences of good and evil, pleasure and pain, as associated or centralised in it. Excepting the Nyāya and the Vaiśeṣika most other systems believe that soul was of the nature of pure consciousness, unaffected and untarnished by pain or pleasure. The experiences belong to mind called *antaḥkaraṇa* or buddhi and are falsely assumed by soul as belonging to it. When the true knowledge dawns all experiences are spontaneously dissociated from the self together with the mind, in which they inhere and the self returns to its natural purity as pure consciousness; and this is the state beyond good and evil, which some regard as being of the nature of bliss and others as pure consciousness and others as pure insensateness. The attainment of the summum bonum is thus the absolute relief from misery and suffering. According to Buddhism all experiences are regarded as sorrowful. Our so called personality is an amalgam of experiences, which disappear every moment and rise up again in the next moment in an apparently endless chain. The concrete integration of the experiences that gives us a notion of self is due to a beginningless ignorance, which is the cause of active desire for living through the experiences and this produces pleasure and pain. The pleasure and pain again strengthen the root of desire and thus the integrity of the self, as the integration of experiences, continues in an unbroken chain. True realization of the notion of falsehood of the self releases us from ignorance and the consequent desires and greed and leads to the dissolution of per-

sonality and this uproots all possibility of suffering. According to the theists such as the Vaiṣṇavas, the ultimate grace of God and the state of summum bonum consists in our eternal consciousness of God and of our love and dependence on Him. The goal of absolute emancipation in which pure consciousness alone remains has no appeal to the Vaiṣṇavas, who wish to remain in constant contemplation of God and immersed in the intoxicated devotion to Him.

We have thus an incontestable evidence of most religions that they all look forward to a state of summum bonum, which, whatever else it may be, is at least the destruction of all sufferings. We may distinguish three kinds of sufferings, physical, moral and spiritual. Of these the physical suffering comes as determined by physical causes. It is only in the case of moral suffering that we feel that our failure to respond properly to the call of the moral urge produces a sense of insufficiency and weakness which tortures us as apart from its consequences, such as failure in adaptation to society producing physical suffering, or mental suffering as loss of reputation, public calumny and the like. But here also a question comes, namely, 'How far does our sense of moral right and wrong tally with the social sense of the same'. Society and Government are closely connected with each other and both of them, in a large measure, follow old customs and the exigencies of the moment and are also led by immemorial superstitions and economic and other incentives. It is, therefore, necessary to distinguish between social and political wrong and moral turpitude. A country at war with another country may be so ferocious as to lay down laws and injunctions which may be quite in conflict with the moral urge felt within. A social custom may attain such a sanctity on account of its long existence and the accumulation of unmeaning superstitions, that a perfectly harmless action may be branded as immoral. An illustration of it may be found in the marriage laws. To take the case of India, it is only the other day that Hindu marriage was considered as sacramental and all its restrictions were regarded as irrevocable and union of men and women not provided by the old sacramental laws was regarded as immoral. But changes of opinion have set in

and we have intercaste marriages legalised and we are on the point of admitting *svagotra* marriages also as valid. Sex-relations other than marital are regarded as immoral. But we have the evidence of the śāstras that in ancient India extramarital relation, except in the case of incest, and a few restrictions was regarded as unobjectionable. Again the Roman Catholic priest cannot marry, but with Hindu priests in the past, marriage and procreation were compulsory immediately after the cessation of his studentship. Among Hindu marriages we find legal status given to sex-unions when the girl was forcibly carried away in cases of rape, marriage with a pregnant woman and so on. We thus see that the status of sex-relation is only a matter of convention of any particular society at a particular time. It has no universality in its nature and as such any refraction of marriage conditions cannot be regarded as a moral fall. It is not the place here to enter into an elaborate discussion about the nature of morality and our views on the subject, but we are of opinion that whatever may appear to an individual as his duty, clear of consequences, is for him, his moral urge, and his failure to effectuate it would be his moral fall.

Evil, physical or moral, may thus be regarded as a failure in adaptation with one's physical environment, or the psychic environment, or an urge which always demands the individual's implicit obedience to it. The notion of morality must, therefore, vary according to social environment and the individual's own personal development. It is quite possible that an action, that is regarded as immoral and sinful, may be regarded as perfectly right by a person of a superior type. The Jews thought that to take meals with unwashed hands or to eat ham were sinful, but Jesus had an entirely different opinion about it. The diverse kinds of taboos in society often wrongly appear to a person with a force indistinguishable from that of a moral urge.

But higher than the moral urge is the spiritual urge and enlightenment, by which a man clearly sees the meaning of all morality in the good of his fellow-beings. When a man rises to spiritual height, the conflict of ordinary morality of customs and manners, of laws and injunctions, melt away in the superior

light of spiritual wisdom. A good deal of moral evil arises from the fact that though the moral urge is felt, yet the neural obstructions are so strong that one may find it difficult to act according to one's moral judgment. His nervous system is not in harmony with his moral urge. It is for this reason that it has often been said that our body is the source of all evil. But when the spiritual light burns in a man with a constancy, his neural obstructions as well as obstructions of the reflexes become much weaker. But even then they continue often to afflict the spiritual man, and this is demonstrated in the melancholy and dejection which often ail the minds of the best of spiritual men. Their standard is not limited to action but to thought and emotion as well. They would not harbour the slightest thought that was not in consonance with their spiritual light. Consequently their struggle is much harder and the overcoming of the neural obstructions more difficult. Fortunately, however, with most religious geniuses the psychopathic arrangement of the nervous constitution is such that the overwhelming emotion and the sparkling light of consciousness in them can easily dominate the neural obstructions. In any case, therefore, evil originates from failure in adaptation with the physical environment or between the psycho-social urge and the neural constitution, or the spiritual urge and the neural obstacles.

Evil does not lie so much in its occurrence as in its apprehension. If we take a match-stick and light a candle, and allow the candle to burn the whole night until it is extinguished, we have a demonstration of the fact, that fire burns a candle; we do not consider it an evil. But if accidentally a whole box of match sticks get ignited on my hand and my fingers are burnt, I consider it an evil. Now I consider it an evil because it caused me pain. But if I am wise and do not take my pain or pleasure as the most important things for consideration in the world, I should not see anything evil in the burning of the fire and the consequent injury of my finger and the pain. If the conditions of the fire are there, there must be the fire. If any causal conditions were present and the effect was not there, the whole world would have been different. Not only that, but even the

evolution of man would have been impossible. If the fire is there, it must burn my fingers, and must cause me pain. That is the psycho-physical law, a cessation of which would have stopped all my sensations. Now what is evil here? I ignore the whole collocation of causes and the chains of effects with which I had started and abstract my experience of sorrow which is the most important episode in the causal chain and I wish that it had never been.

Now, this is again a violence to the whole structure of our thought. For, in hypothetical propositions, if the antecedent is affirmed, the consequent must be affirmed. A denial of this would frustrate all our thinking processes. We do not deny the operation of the mental and the physical operation of the law of causality, but we simply shrink from a particular element of it, which we had ourselves determined by letting loose the operation of the causal chain. Evil is thus not evil as an occurrence, it is only evil in its abstraction and misapprehension. In this our claims of individual pleasure and pain are considered by us as superior to the order, which we cannot for a moment wish to be otherwise without contradicting our existence. It is our egotism and vanity by which we give a special worth to our pleasure, and curse its opposite, and do not take our pleasure and pain as being occurrences which are determined by an order which has brought us into being. Buddhism thus held that all evil was due to ignorance and misapprehension. We misapprehended the passing psychical moments as forming a personality and interpreted the passing moments as experiences of a homogeneous person, and we sought for its cause. But the cause does not lie in the objective, but in our subjective interpretation of the experience as belonging to ourselves. The various schools of Hindu philosophy, in spite of their divergences (which we must ignore in our present treatment), hold that pleasure and pain are moments in the psycho-physical line which are outside our inner self, which is consciousness, pure and simple, timeless and spaceless. It is a great illusion of ours that we regard what belongs to the psycho-physical plane as belonging to ourselves. It is by the integration of that, which does not belong to the self, that we possess our experience and

have our pleasure and sorrow. Every movement requires adaptation and every adaptation is sorrowful. Even pleasures are sorrowful because they pass away and thus produce sorrow. The adaptation that produces them causes sorrow, the effort to maintain them causes sorrow,—all experience is sorrow, because they are fleeting. It is the unmoved self, detached from everything, the timeless effulgence of consciousness, eternally restful that alone is peace and bliss. Christianity is peculiarly devoid of a metaphysics. It is a product of the history of a religion which passes from the tribal to the universal stage, which takes sorrow, from the point of view of a man in the street. Pain and pleasure are passing moments having their transient sense of value. We must learn to accommodate the self to the comprehension and realisation of the great scheme and design, in which pleasure and pain play their temporary parts to run the process of the scheme of fulfilment that God has within Himself.

V

In most systems of Hindu and Buddhist thought, the notion of a personal God is at a discount except in the theistic systems of the Vaiṣṇavas where personality appears as an attribute of the whole,—God, world and the souls. Rāmānuja definitely controverts the idea that God as a personal being is manifested in religious intuition. He denies also that God as a personal being and as the creator of the world, can be proved by logical means; but he says that the existence of God as a personal being has to be taken on trust from the testimony of the scriptures. Almost the whole of Christian theology has developed on the assumption that the existence of a personal God can be proved by logical means. But according to the authoritative testimony of the Catholic Church, the presence of this personal Being is never intuited by direct acquaintance. Of course we must leave apart the verdict of the mystics. The Greek thought, when it began to scrutinize the traditional beliefs, took more or less the same line. The Pythagorian notion, that righteousness could be intuited, or the Socratic notion, that virtue could be known, was the foundation of the rational experiences of religion in Greece; the notion of a divine personality has often

remained more a matter of theological argument than of direct acquaintance.

In the present age, with cultured and cultivated people who are neither hysteric nor psycopathic, who can distinguish between logical proof and hearsay evidence, tradition and history, and are imbued with the spirit of science, religion is often losing its ground, because of the wrong manner in which it is presented to them. The churchmen or the priests, who are often unable to move aside from their old ways of looking at things, who would try to prove the validity of religion from the so-called failures of science, are generally unable to evoke an interest in religion. The spirit of science is not found only in the study of physics, but it has spread practically over all the branches of study. It has affected even the study of metaphysics. No one is going any more to believe in systems of thought based merely on a priori postulates. Under the circumstances religion must have to be explained from a point of view, which even if it not be that of science, should not be such as to come in conflict with our general scientific and sceptical outlook. A God sitting in heaven on a majestic throne, with Jesus on his right side and angels flying about, calling at a definite date in future history by His bugle horn the endless denizens of earth under the grave stones for a final judgment of their sins and virtues, is a myth which cannot be in the present time interpreted too liberally. We must be able to distinguish what is essential and inessential in religion. If religion consisted entirely of myths and stories and if it depended entirely on the authority of such and such a book and prophet, it can have but little appeal to any scientific mind. The myth that the Vedas existed uncreated, and was revealed only in the mind of the sages who were not their authors and that an authorless book of thousands of verses remained eternally hanging in the air, or that God instructed the Vedas to the sages, or created the world in consultation with this great work, would be a fairy tale, which even our children would not believe. That the Qu'ran was composed by God and that the existing edition of Qu'ran was corrected by comparison with the divine copy that existed in heaven by Gabriel, or that God made a covenant with Moses

and his signature could be seen in the rainbow, or that the Gospel of the Bible are the words of God or that Jesus was crucified and died and then came back to life, would be tales as much worthy of belief as the Gulliver's Travels. Religion must stand or fall on the evidence that it can lay before us, and that evidence, if it be a hearsay evidence, is easily ruled out of court. The evidence and testimony of religion is in our experience of righteousness, holiness and saintliness, as a concrete and living reality of our higher experience—an experience that bathes, as it were, our personality and sweeps away the dirt and impurity of accumulated ages. It streams through every vein of our psychic personality and makes itself felt in that self-effacing love for truth, beauty and, for mankind, in a spontaneous flow of benevolence, hope and trust that completely transforms us. It uproots egoism and vanity, arrogance and greed, and instils in man a simplicity so perfect, so catholic, so universal and generous that under the canopy of the stars and planets, he can sit upon the emerald grass in company with his fellow beings in spontaneous self-communication. He has a full understanding of their miseries and sufferings and can forgive their faults and lapses as if they were his own, can share with their ambition and is ever prepared to contribute to the well-being of all. Religion expresses itself as a sentiment that would readily accept and appreciate the equal value of every fellow-being, not merely as a rational formula of equality and fraternity, but as a living article of faith permeating his whole existence. Like milk and honey, sympathy flows from the heart of such a man as an expression of his personality that has given a place to all his fellow beings within the cavern of his heart. He understands his harmony not only with his fellow beings, but the nature around him, every page of which is eloquent to him like a prophet of the hoary past. Such a man may not believe in God as a universal person, but he has tasted the personality of God in the elevated experience of his all-absorbing personality.

I have no quarrel with those minds, in the past or of the present, who in their particular moments of intuition have felt the presence of God as illuminating and animating their entire

being. A touch of His love penetrates into their hearts and wells up from within the ocean of love that lay dormant and overfloods them, benumbs their senses, intoxicates and completely overpowers them. But such an intuition, howsoever true it may be to the person who feels it, is a particular function of his psychopathic system and cannot be universalised as an objective truth acceptable to us all. It is very largely private and personal. It is like the poet's joy which inspires his poem but the expression of which is wholly limited by the lines of his verse. Whatever may be the inner spiritual experiences of a man, his real spirituality depends upon the impress of nobility, magnanimity, simplicity and sincerity that his life bears. It depends on a crucial test as to how far is he solicitous for the good of others and how far have his own passions, cravings and desires been transmuted and transformed. The mystic intuition which may be felt at moments or even the temporary states of ecstasy and trance are but the temporary episodes of a man's inner history, which cannot prove anything until it can completely capture the personality of the man and come to stay in him in an abiding manner. The momentary vision of a great presence may be extremely beneficial to the individual, but by itself is merely a psychopathic function—an experience that can hardly lead us to any objective conclusion. The mere case of a trance, is only a case of psychical prodigy. It may not even prove the spirituality of the man. It is a psychophysical mystery and may not be anything more. I, myself, had a person buried in the ground for three hours and paid him a small sum for this. In the character of Jesus, the most important thing is not his reference to God but his great character, his sincerity. His personality was a fire which burnt to ashes all the dross to which humanity is liable; he had a penetrating insight, an illumination, by which the truth of all things flashed in a moment and, above all, it was his love and charity, his faith and forgiveness, that made Christ godly and the son of God. The son of God should prove his lineage not by referring to His fatherhood, but by the beaming proofs of his lineage as reflected in his character and person.

Of the various ways in which God is conceived in the advanced religions, it is possible to distinguish various types. One

of these may be called pantheism, which probably means all is God. Most European writers regard the religion of the Vedānta as interpreted by Śaṅkara, and in fact all Indian Philosophy or religion as such, as pantheism. This is clearly a mistake. If pantheism means "God is all" or "All is God", strictly speaking, we can speak only of Spinoza as a pantheist and possibly Hegel also. But in the Śaṇkara doctrine of the Vedānta, Brahman is the only reality and it is of the nature of pure consciousness, pure essence and pure bliss, all taken together, to signify an identical reality. The world as such and the human personality with its concrete thoughts, feelings and volitions are regarded as false and irrational. The irrational is that which has only appearance, but no reality. It is only so long that the final reality is not realised that the world has an apparent reality, and the world of everyday experience and science must be regarded as having only this apparent existence. A personal God, as creator of the world, has also thus only an apparent and false existence as mere projection of illusion. The God of Rāmānuja may be called pantheistic in a partial way, for, here though all is in God, God is not the all. The world of matter and the world of spirits or souls form a part of God in the sense that God has absolute domination over their activities. But God in Himself surpasses the limits of the world of matter and the world of spirits. The Upaniṣads are not always very clear regarding the reality of a personal God. From certain passages it appears, however, that God is regarded as the controller of all external forces as well as of all our biological and psychological faculties and that in Himself, He seems to transcend them all; and the world of matter and spirits seem to have emanated from Him like sparks from fire. In other passages, however, it is said that the true reality of the world consists in so far as it participates in God, i.e., as pure Being. All else that has concrete name and form which is within the scope of science is irrational and false. Some of the passages in the Upaniṣads refer to the spiritual experience of a unity or rather oneness in which our concrete awareness, sensuous or intellectual, vanish in an illumination in which the difference between the perceiver and the perceived, subject and the object melts away. This expe-

rience, which is more like an undifferentiated mass of feeling of bliss than any concrete awareness, is regarded as the revelation of the nature of our true self, and as having a logical value in affirming a reality which is the identity of knowledge, essence and bliss. The Maddhvas, on the other hand, think that though the world and the spirits have both emanated from God they are in reality entirely different from Him. The Nyāya and the Vaiśeṣika, admit a personal God as the creator and destroyer of the universe. God, however, did not create matter, but matter is co-existent with God and so are the spirits. It is by God's purposive will that the first action starts in the atoms which following their own law are responsible for the creation of the world. The Yoga again believes in a personal God and a matter which is surcharged with purposiveness and teleology with regard to the spirits or souls. This purposiveness leads matter to go through a process of evolution in such a manner as to offer a field for the experience of the spirits. This leads matter to undergo a two fold process of evolution as the external world of macrocosm and the internal world of microcosm or the psyche. The unity and integration of psyche, the integration of the passing thoughts, feelings, emotions and volitions is possible owing to the existence of an inner interpenetrating purposiveness by which the discrete and separate elements of the psyche, either in the conscious, subconscious or the unconscious states, in the level of memory or below its level, form together a personality. God's will removes the internal obstacles of the brute matter in the way of its evolution, in accordance with its ubiquitous purposiveness. The Gītā gives us the earliest and the most recondite treatment regarding the nature and existence of God and His relation to man, and it is based upon the Upaniṣads. According to it, God is not only immanent, but transcendent as well. The immanent part, which forms the cosmic universe, is no illusion or māyā; it is an emanation, a development from God. The stuff of this world and its manifestation have their basis and essence in Him and are upheld by Him. The transcendental part is the differenceless transcendent reality, the Brahman. The Gītā, however, for the first time in the history of philosophy and religion, introduces the

doctrine that God could incarnate Himself in times of crisis. God is said to have threefold nature. There is a part of Him which manifests as the inanimate and animate; this is His all-pervasive part by which He pervades the world of life and that of spirit. Then there is the other part of God as the transcendent Brahman. But there is still another part of God in His totality and super-personality as a Creater and Upholder of all. The aspect of God's identity with the universe and that of His transcendence and the nature of the Father and supporter of the world are not separated in the Gītā, and both the aspects are sometimes described in the same passage and context. "By my energy I uphold the world and all living beings and fill all crops with their specific juices......... I digest all kinds of food; I am the light in the sun, moon and fire; I reside in the hearts of all; knowledge, forgetfulness and memory all come from me". Thus pantheism, theism and deism are all combined together in one role. Pantheism and transcendentalism, creationism and deism are all affirmed of God.

We thus see that in Indian philosophy of theism, we pass from a primitive state of mentality, in which the philosophic distinction between pantheism and a personal God is not distinguished, into three other stages, firstly, God as the only reality, everything else being false, secondly, God both as immanent, and transcendental, and thirdly, God as a person different from the world naturally evolved. In the Semetic conception of God, as we find in Judaism or the Islam, God appears as a super-person, majestic and all-powerful, just and merciful. Christianity borrowed the Jewish concept of a personal God, but in the traditional interpretation of the Churches God appears both as immanent and transcendental. Christ said 'the kingdom of heaven is within you' and that God was the father of us all. In the two epistles of John we find the doctrine "God is love", first introduced to the Western world. The Gospel of St. John, by introducing the doctrine of the Logos, shows a clear move towards the modification of the notion of the unequivocal personal unity of the Semitic God. Indeed, for most Christian churches the simple Semitic doctrine is now a heresay both by reason of the modification of personal unity and also by the

insistence on immanence. Immanence and omniscience are not the same. The semitic God is omniscient, but the Christian God is both transcendent and immanent. In the Islam also, as we pass from the pure Quranic doctrine to the philosophical speculations of the philosophers, the theologians and the Sufis, we find a fairly constant oscillation between pantheism and the doctrine that "God is love", which attains such pre-eminence in the Vaiṣṇava writers of India and the Christian mystics.

In the earlier days of Christianity, however, the Semitic idea prevailed. Thus we read in the Proverb (1, 7) "Fear of the Lord is the beginning of knowledge". Paul again says, "In flaming fire taking vengeance on them that know not God, and that obey not the gospel of our Lord Jesus Christ: Who shall be punished with an everlasting destruction from the presence of the Lord, and from the glory of His power;" (II Thessalonians, 1.8, 9).

VI

In our modern outlook on religion it is difficult to say what ought to be the dogma of our religion. Fortunately, science which is characterised by its concrete investigations into the particulars and its universalisation as laws, has taught us to believe in rationalism from a new point of view. It has taught us to believe in our experiences and also to believe that those experiences which may appear to be irrational must be admitted, and we must look forward for a new kind of rationalism which would combine the apparently irrational and the rational. If light be corpuscular we cannot rationally conceive it to be wavy, if the reality is continuous, it cannot be discrete, but we experience them both and so we have to believe in them both and we must have to look for a synthesis even though it may be somehow inexplicable for the time being. God appears to us in diverse forms, as the purposive evolution of matter, from mere waves of nothingness to the complex purposiveness of life which evolves through higher and higher purposive stages, as the individual and the social mind, as the moral urge and the spiritual experience, as the cosmic whole and something beyond, as the personal God and the impersonal urge. If science has

taught us to believe in a structure of space that we cannot conceive, is it to be wondered at that the reality which holds everything should be as inconceivable as the personal and the impersonal? St. Augustine said "God is more truly imagined than expressed and He exists most truly than he is imagined". Sir William Watson said

"The God I know of, I shall ne'er
Know, though He dwells exceeding nigh.
'Raise thou the stone and find me there,
Cleave thou the wood and there am I'.
Yet in my flesh his spirit doth flow
Too near, too far for me to know".

It is the nature of a human person to live in an idealised future. Throughout the history of individual human thought we have the history of the growth of images, gradually developing into meaning in relation with other images in a purposive bond of abstract ideas, from which the content of images, in its particularity, has been washed away. We have nowhere any content in our thought of pure negativity, without any temporal, spatial, functional or other capacities. Negativity, as a mere nothing, is almost equivalent to pure being. It is unthinkable in itself and unimaginable in its content. In all creative activity it is negativity in some form or the other that is transcended and a negativity in some form or the other that is created. Negativity thus, pure and simple and wholly as non-being, has no place in our thought except as moments of creative activity. It is for this reason that no concept which is logically valid can be negated without qualification. Negation as such cannot be posited or apprehended in itself in rational thought. It is for this reason that pure negation is irrational and inconceivable. Negation only attains meaning in relation to some definite idea of being which it may refer to or modify. It is for this reason that conservation of matter and energy seems to be a logical postulate of our thought. We cannot conceive that any matter or energy can be utterly destroyed. Science has proved this proposition in certain cases and it is one of the metaphysical dogmas of science that no matter or energy can be increased or diminished. All

negation involves a moment of time. As in our scientific outlook it is almost unimaginable that matter or energy should be destructible, so in our inner consciousness it is difficult to conceive the absolute non-existence of our personality. When we analyse our personality we feel that we know our 'I' by direct awareness or acquaintance. But it is difficult to say what exactly is the content and characteristic of this 'I'. It may, however, be said that it often appears to us that our 'I' persists through time, for we can often associate two particular experiences of different moments as associated within my 'I', which we apprehend at both the moments of its experience. Many philosophers, particularly Dr. McTaggart, hold that the persistence of our "I" through time can be directly perceived. He holds that if at the present moment I remember that I was aware of myself in the past, then the 'I' who now remembers and the 'I' who was then aware must be the same "I". But it must in this connection be pointed out that mere profession of memory is not a sufficient evidence by itself. Indian philosophers as a rule always deny the validity of memory as a means of proof, for, memory in general, takes away something from the original and also sometimes adds a new content not present in the original. In the present case, even in our dreams, we have various kinds of experiences and on awaking we may remember them. I may dream that I had committed a murder. It is obvious that this dream-memory was not correct. There is a further and more valid objection in this that the 'I' that appears in consciousness is of such a homogeneous character that if there was a constitutional difference between the two moments of the 'I', the merely homogeneous character would be unable to show the difference. McTaggart understands probably the force of this argument and says that although there is no absolute certainty about it, it is very probable that it is so. He, however, goes on in his line merely on grounds of probability and asserts that there is one self, persisting throughout a man's life. He further says that the existence of self-consciousness is not an indispensable condition of the existence of the self. He holds that to call a conscious being a self only when it was self-conscious would involve that each of us would gain and lose the right to the name many times a day. Person-

ality, therefore, cannot be defined as being conscious of self, for this would involve that a self is that which is self-conscious, and such a definition would be circular and unmeaning. McTaggart further held, also, that spirituality may be defined as the quality of having a substantial content which is the content of one or more of our senses. From this it follows that all selves are spiritual substances; but that they are not the only spiritual substances. Parts of selves, such as thoughts or volitions, or the parts of thoughts and volition would be spiritual. We do not wish to enter into any controversy with other relevant doctrines regarding the self of McTaggart. But I wish to point out our differences from the very beginning that a persistence of the notion of 'I' does not really mean the existence of one unitary person throughout life. In reviewing the mental states, the modern researches, that thoughts, feelings and volitions may remain in an unconscious or sub-conscious state without coming to the conscious level, naturally point to the conclusion that awareness as such is an emergence at a certain particular level of psychosis.

The study of psycho-analysis and pathological psychology has led to the conclusion, as we have said above, that psychical contents have an independent existence apart from their being known—and that there are internal mechanisms by which they are often repressed before they can arrive at the conscious level. The self or the 'I' which is perceived by introspection when we are self-conscious and which is supposed to exist even when we are not conscious of it, cannot be regarded as being identical either with the illumination of consciousness or the psychic content. If it is admitted that the self or the 'I' is something different from the psychic content and has yet a reality of its own, its reality must be different from that of the psychic content. Yet, what else may be found in our psychic world but the psychic contents rising into the level of consciousness, generating instinctive or automatic habit-reflexes and co-relating the bodily system to the objective environment, be it social or physical. There are systems of psychology which define personality from a purely objective point of view. According to this objective method a man's personality is a system of reactions and reaction-possibili-

ties *in toto,* as viewed by fellow members of a society. It is the sum total of the behaviour trends manifested in one's social adjustments. Morton Prince defines personality as the sum total of all the biological innate dispositions, impulses, tendencies, appetites and instincts of the individuals and of all the acquired dispositions and tendencies acquired by experience. The former would embrace innate psycho-physiological mechanism or arrangements such as those of the emotions, feelings, appetites and other tendencies manifested in instinctive reactions to the environment; the latter, the memories, ideas and sentiments and other intellectual dispositions acquired and organised within the personality by the experiences of life. The integration into one functioning organism or whole of this innate and acquired dispositions with their mechanisms and inherent forces, by which they come into play, is the personality. It is needless here to enter into any elaborate discussion into the nature of personality and to review the opinions of the various important psychologists. This must be reserved for a future treatment of the subject, but we do not agree either with the objective definition of Dashiell or with that of Prinie. Personality to us, appears, to be not the sum total of thought, feelings and emotions, but the unity, the system of organisation, in which the various inherent and other tendencies and the various experiences and the psychic temperament, reflected from the neural basis, are welded together or transmuted into new forms by repressions and other mechanisms, forming an organised psychic being. The principle by which the various psychic elements are welded together is a peculiar purposiveness, is loyal not only to the momentary contiguous psychic contents, but to the psychic being as a whole. The law followed in this integration is the same as that found in any biological organism. The psychic unity that grows from the infantile period is not only in co-ordination with the psychic contents, but also with the nervous and physiological system as a whole. Each new experience sets in with other experiences in perfect conformity as crystals coalesce with crystals. It must, however, be remembered that within the general integrated whole, the system or the unity, minor or subordinate unities may be formed in consonance with the general unity. Thus

a man's political, social and family reactions, and scientific or religious reactions, may not always be of one harmonious type. You cannot always foresee what will be the reactions of a man, who is soft and tender-hearted, in his family or social relations, in the field of war, or when his dignity is touched. An intensely scientific man, who would not accept any proposition in science without the most stringent proofs, would often very easily swallow a religious myth or ghost stories or the postulate of post-mortem survival of the self. These different unities are like so many different selves which enter into an internal harmony. Often it may so happen that in levels below the conscious, unities may be formed quite unconsciously which may show itself in dreams and in pathological conditions and also may sometimes gain so much strength as to produce a concussion with the general unity as a whole, and this may give rise to psycho-pathological symptoms and disturbances. Though memory is one of the fundamental factors that may be regarded as cementing many of the psychical contents, yet the actual principle of cementation goes far deep into the regions, where the mnemonic functions are of no avail. This principle has its roots first in the biological and physiological functions and the reflexes, and, then, into the inherited tendencies, temperament, the appetitive inclinations and the various experiences which together form the universality as the individuality of the self. When we in our conscious moments refer to the 'I', it is a reference to the general unity and the individuality or that character of it which marks off one psychic system from another as reflected in direct acquaintance. That acquaintance, cannot give us any more knowledge of its inner constitution than our acquaintance of a tree can clarify the nature of the tree itself.

From what has been stated, it will be seen that in our view there is no room for any belief in any permanent essence in our psychic being—any permanent soul or self which outlives the resolution of the body and the organism as a whole. It would be impossible, however, to say whether there is any fundamental essence in ourselves that preserves its individual existence. But scientific observation and a review of our psychical nature does not demonstrate any proof of the post mortem existence of any

self or soul.

Under these circumstances, the projection of eternity and immortality that we have in our consciousness has to be explained on quite different grounds. It has been said before that pure destruction or negativity is not within our experience, and for this reason even in the field of science we cannot conceive of any destruction. We believe almost in an *a priori* fashion that matter and energy are indestructible. Our belief with regard to this has been scientifically proved by experiments. It cannot, however, be known or demonstrated by experiments whether nature is ultimately limited so far as destruction is concerned. But in any way it is not conceivable for us to imagine complete destruction. From the earliest times the doctrines that, what is existent cannot be destroyed, and that nothing can come out of nothing, have been the postulates of thought both among the Hindus and the Greeks. In nature, however, the emergence of new functions, entities or realities is a matter of common experience. It is largely, however, for our inconceivability of destruction and non-apprehension of the meaning of the continued course of experience that it becomes difficult for us to imagine that we should cease to exist after death. From the most primitive period we are accustomed to think that pleasure is our summum bonum. As all religious beliefs are concerned with our well-being here and hereafter, most of the religions of the past had conceived of a state of absolute happiness where the religious men would retire after their death. It is for this reason that one of the most important beliefs of the various religions consists in an assurance of heavenly existence after death. Belief in soul and its well-being after death had, therefore, been the creed of most religions. If in our explanation, a physical post-mortem existence happens to fail as an interpretation of immortality, the question that naturally occurs is what may be the true interpretation of our faith in immortality.

In the famous dialogue of the Kaṭha Upaniṣad, between Yama and Naciketas, the former is supposed to have said that those who did not believe in a superior world suffered death again at his hands. But in conclusion Yama does not speak of any other world, which man is destined to achieve. Yama's final

answer is that the true self of man is deathless. He then says that this deathless self can only be realised by deep intuition, or meditation. He also says, "He is the Highest Person, who is awake in us while we are asleep, shaping one lovely sight after another, that is Brahman, that alone is called the immortal. All worlds are contained in it and no one goes beyond. This is that one ruler, the Self within all things, who makes the one form manifold. The wise who perceive Him within their Self, to them belongs eternal happiness, not to others".

Yama further says, "He, who does not understand the whole world as the manifestation of the power of Brahman, before his death, has to take body again in the world of creation. When all desires, that dwell in the heart, cease, then the mortal becomes immortal, when all the ties of the heart are severed here on earth then the mortal becomes immortal. Here ends the teaching".

The above teaching of the Upaniṣad points to a solution, if we take the liberty of interpreting it in our own way. True immortality does not consist in the prolongation of an entity, be it soul or self through endless moments of time. Time as multiplication of moments as we perceive it involves change, and every change is mortality. It is for this reason that in Hindu conception heaven or hell is regarded as mortal, howsoever may be the length of time, in which a person may be there. At each moment he is moving towards the conclusion of his time to which his stay in heaven is limited. No enjoyment can be an enjoyment which involves change. For every change involves with it the notion of decay. For this very reason the conception of immortality in a physical heaven, existing in space, is a false notion of immortality, which is conceived only by the common folk, who have no insight either in philosophy or in spirituality. True immortality consists only in a timeless experience, which is the summum bonum of spirituality. Jesus also says that the kingdom of heaven is here on earth. The followers of Jesus misunderstood the deeper meanings of his words and thought that soon Jesus was returning for establishing this kingdom. The true kingdom of heaven is the revelation of God in the form in which He has been revealing Himself through the animate and inanimate nature and through society and our own personality. This

revelation is the revelation of purposiveness, of other-inclusiveness, which in human experience is but another name for love. The real meaning of our life consists in this feeling of other-worldliness or the superior-worldliness, that we do not live in our own world alone but in the world of others also, and that our sole purpose of existence is for the sake of others. This feeling in its active aspect may reveal itself through time and action of a type which supersedes the moral conflict, but it has an inner spring of its own, wherein it consists of a bliss which in its depth and essence is timeless experience, a veritable immortality. The mere projection and repetition of this life in heaven and the expectation to enjoy the pleasures of the earth is an entire misunderstanding of the spiritual transmutation that the concept of immortality involves. The nature of our earthly life, our earthly joys and our earthly attractions are in themselves sorrowful and mortal and transitory and consequently a repetition of them, would, in an unending series, constitute the same mortality from which we seek refuge. Pleasure and sorrows come as but moments in us for the fruition of the final purpose towards which our destiny carries us. There are moments which come for being eliminated in the temporal process, they are not their own purpose, they are for others; and attachment and detachment to them constitute the process through which our destiny must lead us for the final realisation of our purpose. When the season comes, nature adorns her with flowers and foliage, shrubs and groves, wear beautiful apparels, and leafy dales with emerald hue captivate our eyes. But nature is not greedy, she has in her the true ascetic, who can take and give away with same alacrity and response. The other season comes and she denudes herself of her beauty and charm. Her flowers fall down, her brooks become dry, her springs waterless, her ground parched and dried, her grassy lawns loose their colour and charm. But she does not resist it, her destruction, her denudation, her desolation takes her back to her inner sources where she meditates and meditates and brings over a new creation. Her great immortality is in her eternal life. She has no attachment to any specific form and she does not wish to continue in it for endless time. So are we, we, the children of nature and the law of the universe, the law of

purposiveness and love. The law of the deepest creation of love, unfathomable and timeless must surge up from one human organism to another and must fulfil, the destiny of the whole, the destiny of the universe and the destiny of God in nature and man. What are the individuals but the expression of the same vision that has eternally expressed itself in birds and beasts, flowers and plants, in the birth and death of societies and nations, in the creation and recreation of histories and the fall and rise of empires. To cling to the individual, to cling to the momentary, is to cling to death. We live in God, God—the father, God the destructor, and God the regenerator.

VII.

The question of morality is most intimately connected with religion. Development in morality is an indispensable condition to enter into spiritual life. The question naturally arises—what is the goal of morality? Morality consists in the domination of evil by the good prompted by an urge of value. Spencer thought that our evils sprang from the necessary limitations of an ill-adapted society and, therefore, evil was limited in quantity and that gradually with our advancement, as the quantity of evil would gradually disappear, there will come a time when no evil would be left. The urge of morality, therefore, was limited. But there is an obvious misconception in considering morality as consisting merely of social conduct. Morality includes within it not only physical action and speech but also thoughts. It implies not only a deeper life, a life purified and freed of its impurities, but also a becoming. It is on the strength of the infiniteness of the moral struggle that many philosophers have argued the possible prolongation of this life after death. But the present writer is quite unwilling to admit the strength of this argument, particularly on the ground that assuming that there was a prolongation of this life and that moral struggle was our ultimate purpose, and that this purpose was endless, nothing is known regarding the environment of our supposed future state of existence. Every struggle and its keenness depends upon the strength of the two opposing and contending powers. The law of moral advancement implies that in an advancing man, the

strength of opposing the evil is practically on a geometrical progression. It has to be admitted, therefore, that even in this life, in the field or moral advancement, the strength of the evil is gradually diminishing. If we have to suppose that the moral struggle is infinite in the sense, that it is prolonged through endless time we have to suppose that in the field of moral struggle after death, the power of evil becomes greater. We have no evidence from any side that the power of evil increases in our possible post-mortem existence. The argument of immortality from grounds of moral struggle, does not therefore, seem to be weighty. We cannot also conceive that struggle for the sake of struggle should be the purpose of human life. A struggle for a becoming is what we find the law of the world.

In our reference to morality in relevant places, we did not favour the view of any objectivity in morality. Moral consciousness is a quality of human psychology, a sense of value that it carries. It is, no doubt, objectively projected and that is largely because moral consciousness has to be reflected in actual physical action towards our fellow beings. These physical actions offer us a criterion of good from the consensus of public opinion. The rightness or wrongness of an action, therefore, has to a large measure an objective standard to satisfy. But there may be cases in which the rightness or wrongness of an action cannot so easily be adjudged by public votes. In times of war or in case of societies, whose moral elevation is not high, the moral judgment of an individual, may be in conflict with the judgment of the people at large. Even non-moral actions, such as sex-relation and the like have often the validity of a moral code in most civilised societies. Thus there may be many cases—and Spencer gives abundant illustration of this—in which the moral judgment cannot be suitably objectively testified. The safest course, therefore, seems to be in placing the source of authority in morality within one's own self, provided that the urge of morality is always distinguished from the urge of pleasure. The verdict of the self-seeking person, that he prefers to act in a particular manner, because he finds it preferable or convenient, is of course , no test for the rightness of an action. The person in question should have to prove it to himself or to others that

there was an extra value-sense, apart from that of pleasure for himself, that urged him to that particular action. But though we describe the centre of authoritativeness of moral action within the subject himself, yet it is possible for us to lay down a principle of supreme objectivity which demands our obedience to it. This objectivity which first appears as an urge in the case of a moral conflict, grows gradually into an attraction as our life advances. The content of this objectivity is other-purposiveness of love. In the first stage of the moral conflict it often fails to show itself in its proper colour. It seems to manifest itself in different kinds of social values such as, truthfulness, non-stealing, non-injury and the like. These imperatives imply more a cessation from particular cases of conduct and it does not lay any stress on the active performance of virtuous deeds. It is for this reason that the European conception of morality is generally limited to negatives, 'Thou shalt not steal', 'Thou shalt not lie', 'Thou shalt not commit adultery', 'Thou shalt not murder thy neighbour.' In society a man is called moral when he desists from evil. Job complains against God that those, who obey His commands and are righteous and those who are sinful suffer equally. He complains of many wrongs physical and social, and of the sorrows of his mind from which he finds no rest even in his dreams and he charges God for injustice. This is the supreme and constant complaint of man against His laws. The so-called moral man would say, 'I have obeyed all the commandments of God and why should I suffer'.

It must be brought home to everyone of us that so far as we have a physical body, and so far as we fail to adapt it with our surroundings, be it for congenital defects of our body or our wilful transgression of nature's law, we must necessarily be subject to physical evil. Moral evil arises from our sense of failure to follow the ideal of the urge for good. But European Ethics commits a vital mistake in limiting morality purely to negatives. By this negative morality we can adapt ourselves to our societies outside, but it contributes to a small measure only to our inner becoming which ought to be the central principle. Our inner morality is to be judged not by what we do not do, but by what we become. It is in this inner becoming that the moral conflict is

at its highest.

The appetitive tendencies of man and the self-regarding impulses which bear a replica of its history in the animal world stand as the obstacle towards the development of other regarding impulse of a non-instinctive character or love. The moral urge is like the urge of a poet who has not yet attained a mastery over the technique of language and metre, diction and rhyme, but whose urge as a poet compels him to express his thoughts in an aesthetic manner. He is annoyed with himself when he tries to express his joy, and fill himself with a sense of beauty, and fails to do so. The conflict of the moral man is the same. He feels the urge of a superior calling, and tries to mould his whole personality after that ideal, to burn the dross and impurity or to transmute them into gold, and yet succeeds but imperfectly. When the moral man is at the culmination of his advancement or very nearly so, he is very much like a poet, who has a complete mastery of language and technique, of metre, rhyme and rhythm. He listens to his deity within, resigns himself to him and rapturously wonders how his words are torn from his lips, his anguish and pain turned into joy, the rhythm of his heart-beats turned into resonant rhymes and the creation of hearty self-love flows out in torrents of poetry, of ravishing and bewitching charm. The poet does not write poetry, he becomes a poem. For the time being his personality melts in the love of nature, and the joy that wells up from the depth of his being transforms his speech into an eloquent messenger of his heart. So is the man who is transcending the limits of morality and entering the portals of spirituality. He is no longer in conflict with his urge, his urge is spontaneous, dancing in cadence with the dance of the blood in his veins. A spiritual man is thus an artist, a poet; not of words, not of colours, but of emotions, thoughts and volitions. He transmutes his life into a divine element, transforming his primitive passions into elements of new value, his vulgar emotions and volitions rising into glory and spontaneously building by themselves a temple of God and humanity at which he looks, like a spectator overwhelmed with joy and emotion. He melts into the flow of love for humanity and for his ideal, which though far is near, though inscrutable is easy, though un-

thinkable yet is simple. This work of the artist goes on in the life of a spiritual man, in which time and temporality is forgotten, in which the horrors of the passions subside, in which immorality, evil, and suffering melt away in a divine perception, which transcends all speech and thought, which breaks open the bonds of the finite and the infinite, a moment's copresence with which is the elixir of mortal life. It is a taste of God in man, living through into the lives of all beings, and the culmination of the creative process. This is in reality the spiritual immortality that is the destiny of man to attain.